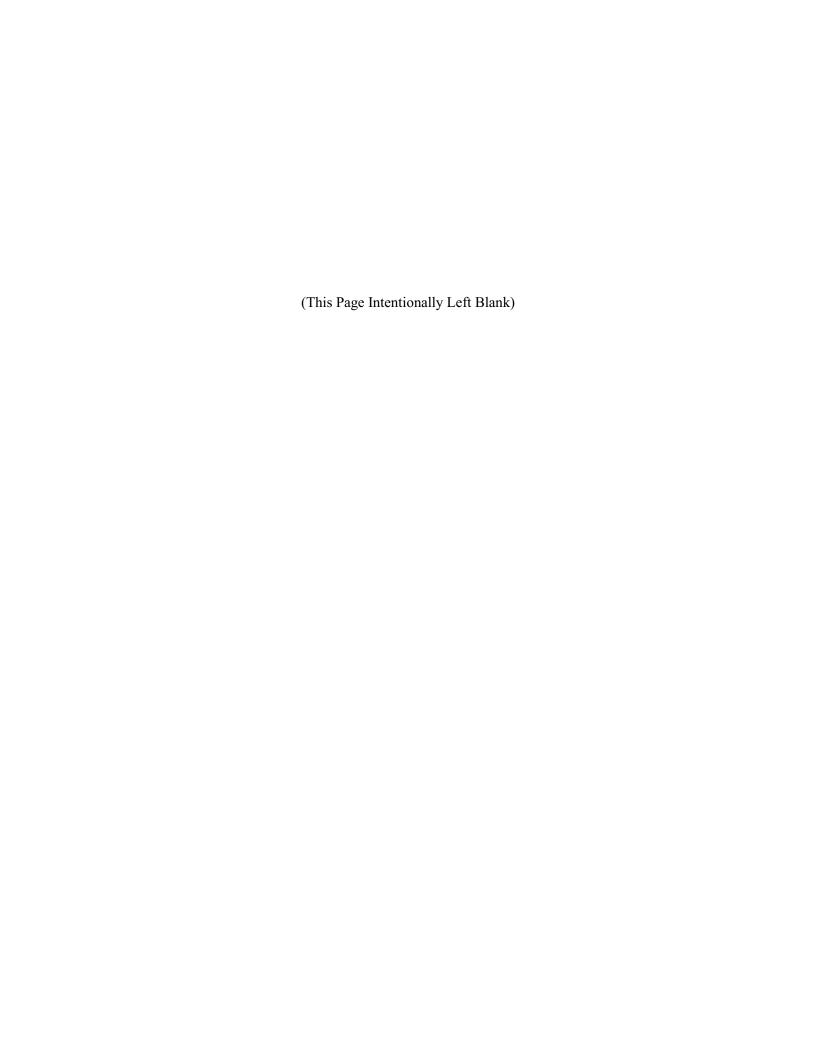


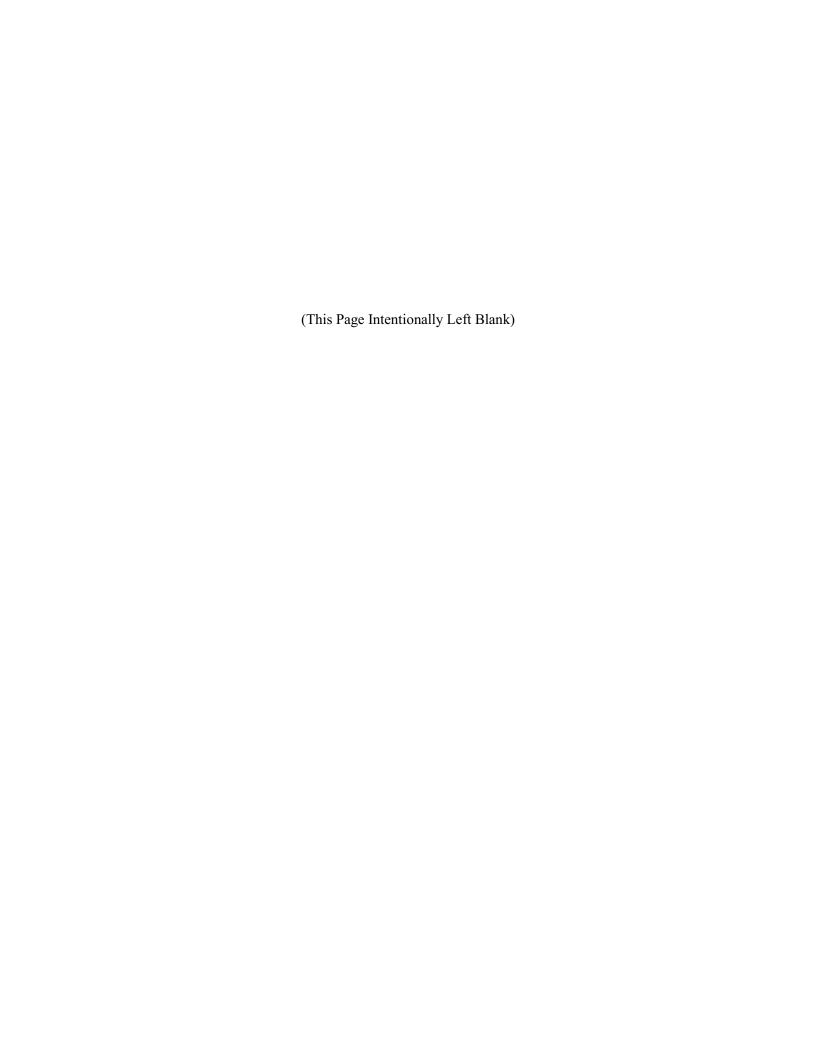
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Prepared for the U.S. Department of Energy DOE Idaho Operations Office



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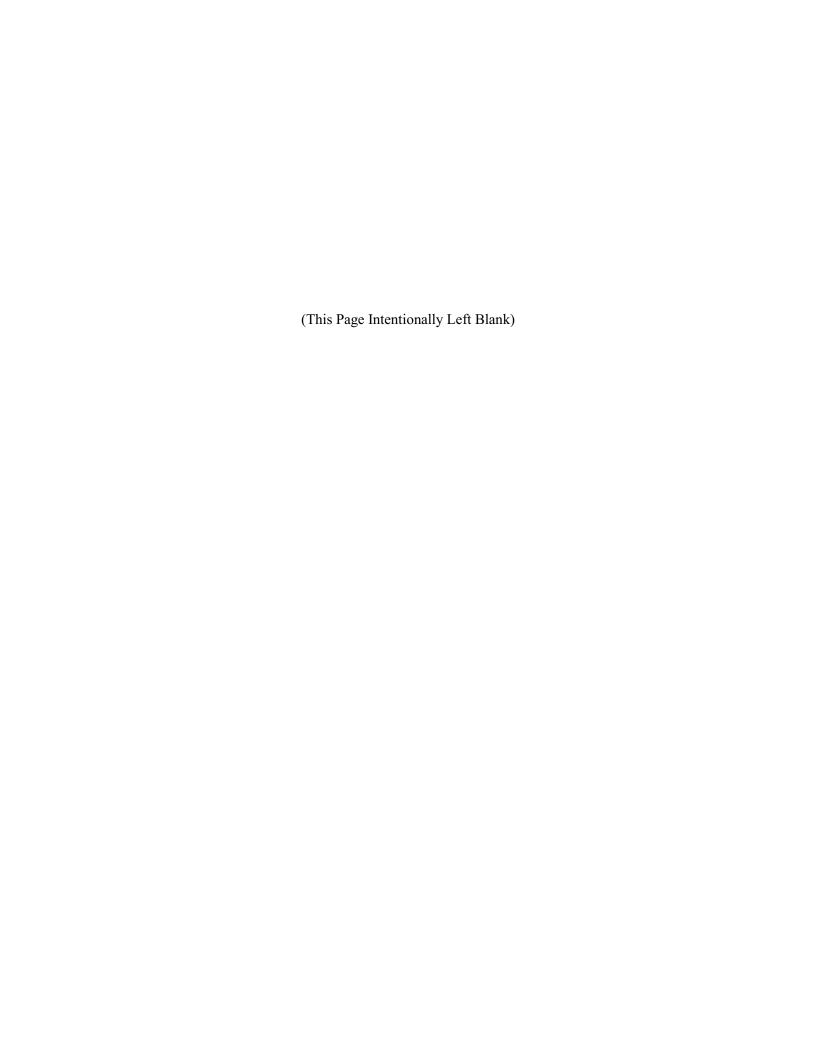
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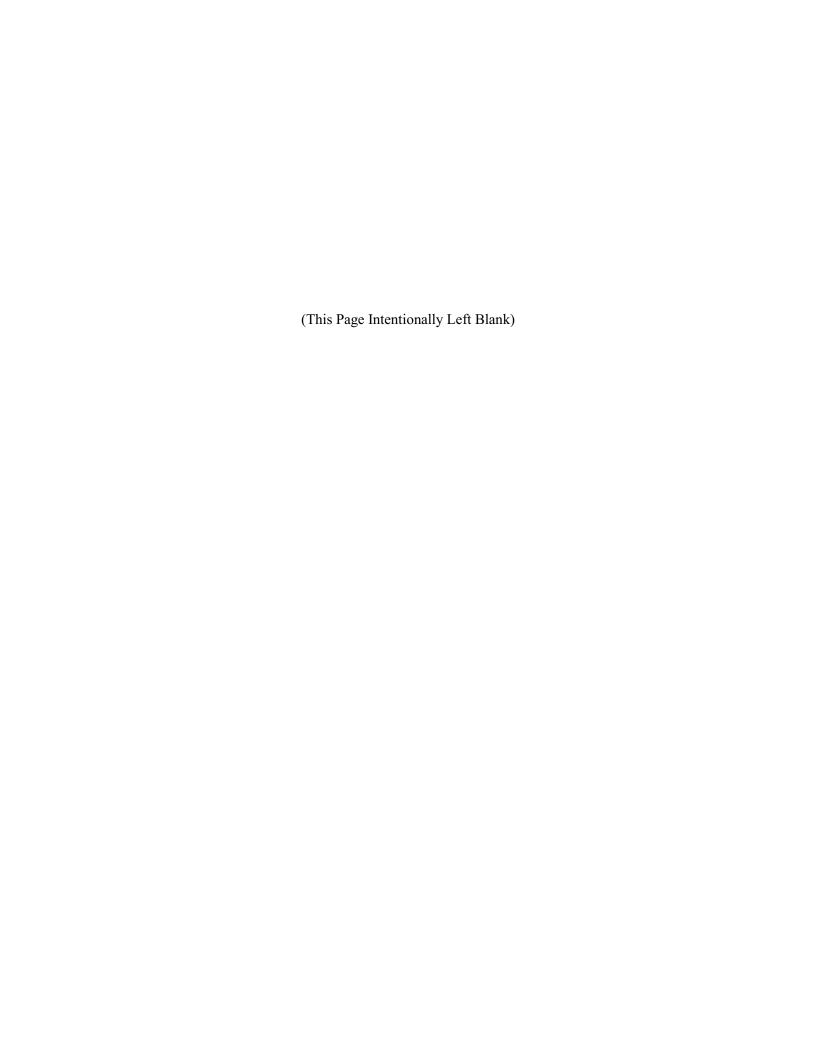
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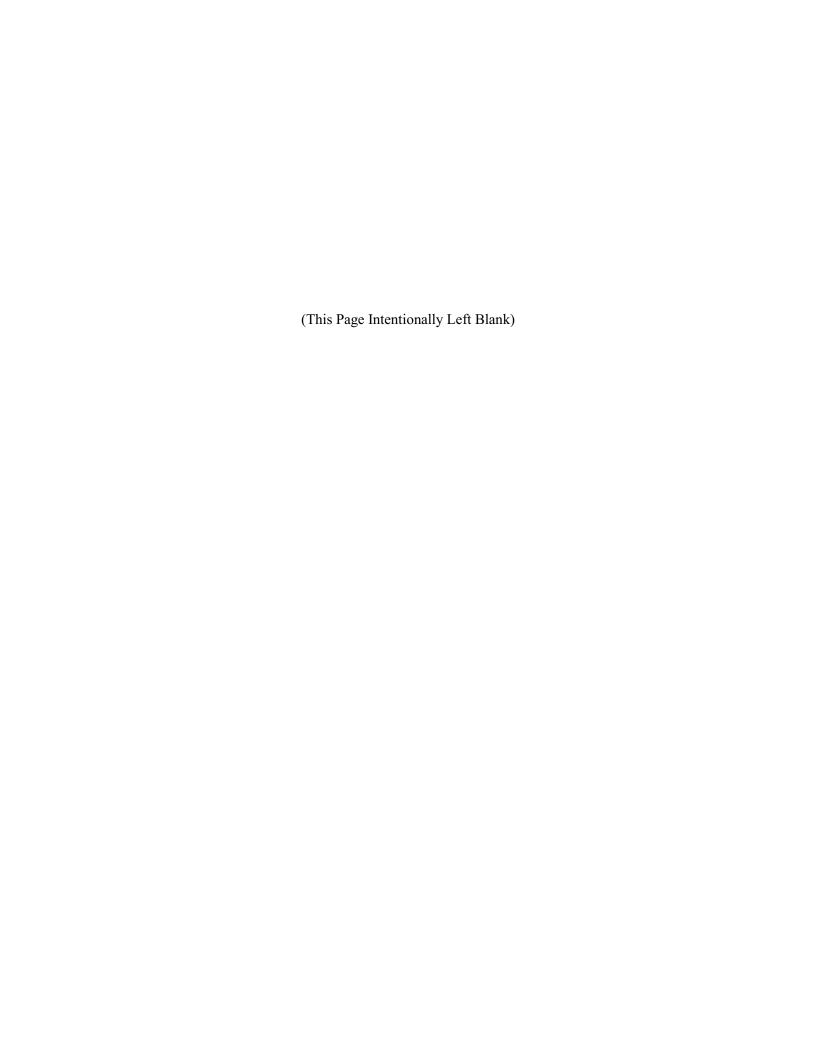
DOE/ID-11383 Revision 3

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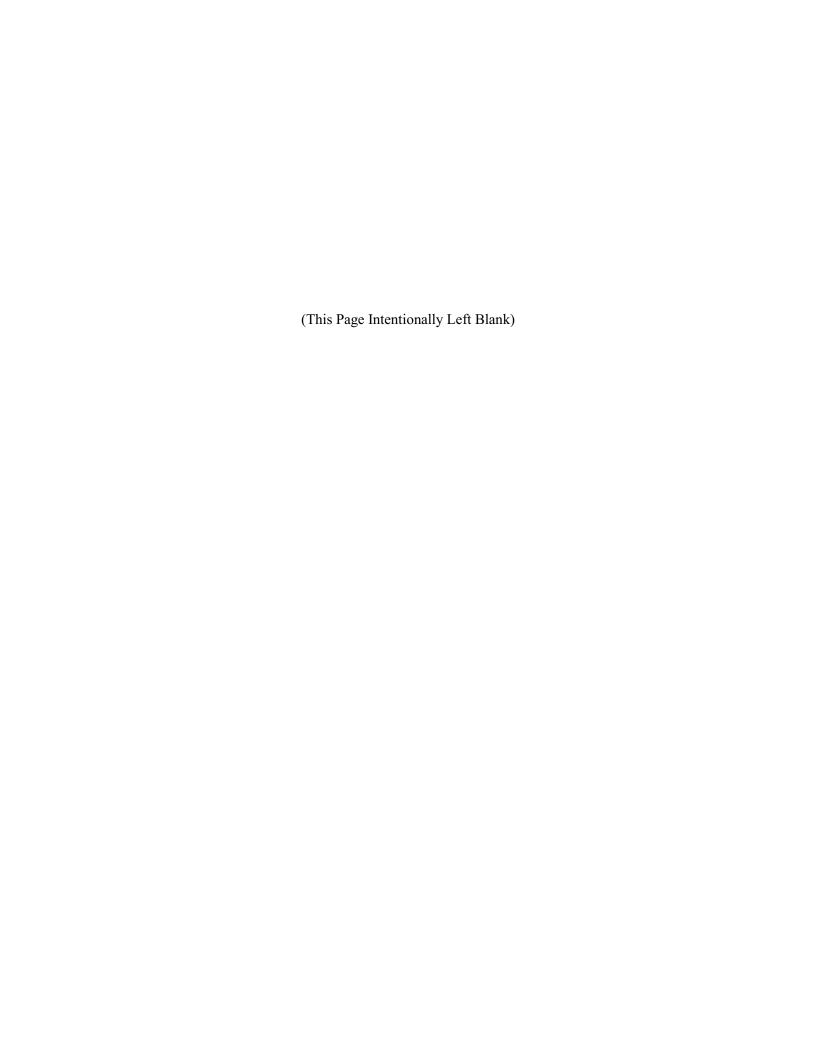
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Idaho Treatment Group, LLC

Advanced Mixed Waste Treatment Project

01/27/2012

Date



EXECUTIVE SUMMARY

Clean energy and sustainability have long been at the core of the mission of the U.S. Department of Energy (DOE) and are reinforced in Executive Order (EO) 13514, *Federal Leadership in Environmental*, *Energy*, and *Economic Performance*. DOE has articulated its key strategies and goals in its 2011 Strategic Sustainability Performance Plan (SSPP). The Idaho National Laboratory (INL) Site incorporates these strategies through this plan.

Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management," establishes requirements to cost effectively meet or exceed the goals and objectives of the Energy Policy Act of 2005 for energy efficiency, use of renewable energy, transportation energy, and water conservation at federal facilities. DOE Order 436.1, "Departmental Sustainability," contains requirements that DOE will accomplish to implement EO 13514 and EO 13423.

DOE Order 436.1 provides requirements and assigns responsibilities for managing sustainability within DOE to ensure that missions are carried out in a sustainable manner, to institute wholesale cultural change to factor sustainability and greenhouse gas (GHG) reductions into all DOE decisions, and to ensure that DOE achieves the sustainability goals established in its SSPP. DOE Order 436.1 and the SSPP require that DOE Sites commit appropriate personnel resources, establish a financing plan that prioritizes the use of life-cycle cost effective private sector financing and optimizes the application of appropriations and budgeted funds, and establish specific performance measures and deliverables designed to achieve the listed requirements.

The "FY 2012 INL Site Sustainability Plan with the FY 2011 Annual Report," hereafter referred to as the Plan, was developed according to the narrative requirements from the "Guidance for the FY 2012 DOE Site Sustainability Plans" issued on September 8, 2011. This Plan contains strategies and activities that will lead to continual GHG, energy, water, and transportation fuels efficiency to move the INL Site towards meeting the goals and requirements of the SSPP, EOs 13514 and 13423, and DOE Order 436.1 before the end of Fiscal Year (FY) 2020. The Plan summarizes energy and fuel use reporting requirements and references criteria for performing sustainable design. Plan requirements are integrated into each of the INL Site contractor's Integrated Safety Management System (ISMS) and Environmental Management System (EMS). Finally, Sustainability Program directives based on this Plan are integrated into the Ten-Year Site Plan (TYSP) and operations and acquisition systems.

For the purposes of this document, the "INL Site" is considered all operating contractors and the Department of Energy Idaho Operations Office (DOE-ID), and includes the industrial complexes located west of Idaho Falls and the Idaho Falls buildings. INL is considered to be those facilities operated by Battelle Energy Alliance, LLC (BEA). The Advanced Mixed Waste Treatment Project (AMWTP) and Idaho Cleanup Project (ICP) are referred to by their noted acronyms and include all facilities under their individual responsibility.

This DOE-ID INL Site document serves as an overall INL Site Sustainability Plan. It is supplemented by individual contractor plans and strategies as needed. Updates to the Plan are anticipated annually with added specificity as projects are developed and requirements change. This Plan encompasses all contractors and activities at the INL Site under the control of DOE-ID. The operations and activities of the Naval Reactors Facility (NRF), located on the INL Site, are specifically excluded from this Plan.

The Environmental Management Mission assumptions for this Plan include the AMWTP ceasing operations and be in a cold, dark, and dry status by FY 2018; the remaining ICP operations at the Radioactive Waste Management Complex (RWMC) will be complete by FY 2018 with buildings in a cold, dark and dry status; the Idaho Nuclear Technology Center (INTEC) liquid waste management system operations will be discontinued by FY 2015; and the INTEC New Waste Calcine Facility will be demolished by FY 2015.

The intent of this Plan is to provide the overall Sustainability strategy for the INL Site during FY 2012. Integral to this Plan is the FY 2011 Annual Report. The Annual Report data for FY 2011 are provided on the Consolidated Energy Data Report (CEDR) that is included as Appendix C.

DOE-ID and the INL Site contractors use their existing EMS to establish goals, track, and review progress towards meeting the energy and water efficiency, greenhouse gas reduction, and renewable energy goals. INL Site contractors will leverage all available sources of funding including Strategic Investment Funding (SIF) and alternative funding programs such as Energy Savings Performance Contracts (ESPC) to implement energy and water reduction projects. Projects identified to date are included on the Conservation Measures worksheet of the CEDR. The INL Site will leverage utility incentive programs to the maximum extent available.

The INL Site spent nearly \$14.9M in FY 2011 for facility, process, and equipment energy. Of this total, \$12.9M was spent for building energy, \$1.1M was spent for process energy, and \$878K was spent on equipment fuel. The managed area used over 907 billion Btu of energy and 898.0 million gallons of water. Transportation fuel use across the INL Site in FY 2011 totaled 1,157,999 gallons of various types of fuels. The fleet is composed of light-duty vehicles fueled by gasoline and E-85. Heavy-duty vehicles include over-the-road buses fueled by diesel and biodiesel, and a complex assortment of trucks and equipment. Typically, 9.5 million miles are driven annually and over 50,000 hours are logged on heavy equipment.

Table ES-1 and the graph in Figure ES-1 summarize the Annual Report data and provide an FY 2011 status of the DOE SSPP goals. The FY 2011 goals in the graph are the trend point of where the INL Site should be after FY 2011 to remain on track to meet the overall goals by the end of FY 2020. Discussion of the FY 2011 status and planned FY 2012 actions are found in the body of this Plan.

Table ES-1. Annual report data.

SSPP Goal	DOE Goal	Performance Status	Planned Actions and Key Issues	Risk of Non- Attainment
1.1	28% Scope 1 and 2 GHG reduction by FY 2020 from a FY 2008 baseline	The INL Site Scope 1 GHG emissions are down 24.8% and Scope 2 GHG emissions are down 9.5%. The combined Scope 1 and Scope 2 emissions decreased 22.5% in FY 2011 as reported by the Sustainability Performance Office (SPO).	GHG emission reductions will primarily be obtained through efforts to reduce building and transportation energy. AMWTP and ICP contract completion will contribute to further reductions, helping make progress toward the goal. However, an 8% gap in electrical intensity reduction exists in current planning. This results in a 9% gap in meeting the Scope 1 & 2 GHG reduction goal. A \$42–\$52M investment in energy efficiency projects is needed to close the 9% gap.	Medium

SSPP Goal	DOE Goal	Performance Status	Planned Actions and Key Issues	Risk of Non- Attainment
1.2	30% energy intensity reduction by FY 2015 from a FY 2003 baseline	The INL Site has reduced energy intensity 5.6% from the FY 2003 baseline intensity (10.5% when normalized for weather factors) as demonstrated through data entered into the CEDR and compared to FY 2003 data.	The INL Site short range energy reduction strategies account for a 22% reduction in energy intensity by FY 2015. An 8% gap in electrical intensity reduction exists. To achieve the initial 22% reduction, capital project upgrades are planned primarily through alternative funding mechanisms that include ESPC and UESC. Additionally, INL Strategic	Medium
			Investment funded projects are planned for FY 2012 through FY 2015 that will assist with additional energy savings. Finally, AMWTP and ICP contract completion will contribute to further reductions, helping make progress toward the goal. Closing the 8% energy reduction gap will require approximately \$42–\$52M in energy efficiency projects.	
1.3	Individual building or processes metering for 90% of electricity (by October 1, 2012); for 90% of steam, natural gas, and chilled water (by October 1, 2015).	The INL Site meters 100% of its natural gas and 53% of its electric usage. An analysis was performed on all existing infrastructure that will still be in place by FY 2020. From this analysis, the INL FY 2011 Metering Plan (PLN-3911) was developed to provide a roadmap on how the INL Site will reach the goal of metering 90% of electricity. Metering was installed in FY 2011 on seven facilities with the highest probability of meeting the Guiding Principles (GPs).	Meters will be installed over the next 2 years to be compliant with the 90% metering goal. At no cost to DOE, the City of Idaho Falls is planning to upgrade all of its electrical power meters to smart meter technology and INL's Idaho Falls facilities will be upgraded as part of the city's initial upgrade project during FY 2012. The remainder of the 23 facilities identified as having the highest probability of meeting the GPs are targeted for meter installations in FY 2012. All other meters are planned for installation through ESPC projects.	Low The INL Site did not meet the October 01, 2012 deadline, but will meet the 90% goal within 2 years.

SSPP Goal	DOE Goal	Performance Status	Planned Actions and Key Issues	Risk of Non- Attainment
1.4	Cool roofs, unless uneconomical, for roof replacements unless project already has CD-2 approval. New roofs must have thermal resistance of at least R-30.	The INL Site replaced 19,933 ft² of roofing on two existing buildings with cool roofs using the RAMP program. Two additional cool roofs were installed using INL's normal roof replacement program.	AMWTP and ICP project completion do not involve installation of cool roofs. However, INL roof replacements planned for FY 2012 will result in new cool roofs exceeding 20,000ft ² . Additionally, the new Energy Systems Laboratory (ESL) will be complete in FY 2012 and will include a cool roof.	Low Unless funding for RAMP is eliminated.
1.5	7.5% of annual electricity consumption from renewable sources by FY 2013 and thereafter (5% FY 2010–FY 2012).	The INL Site produced no onsite renewable energy, but procured a total of 16,900 MWh of Renewable Energy Certificates (RECs) from the Western Area Power Administration (WAPA). This purchase represents 7.5% of the INL Site electric usage.	AMWTP and ICP project completion do not involve installation of renewable energy systems. However, INL is actively pursuing Renewable Energy Generation capability and annually purchases RECs in amounts as outlined in the Energy Policy Act of 2005. Non-Attainment Issue: Although technically feasible, low electric costs and long paybacks make renewable energy installation economically challenging. Leveraging potential ESPC renewable energy installation (solar, geothermal, wind, bio-mass) may provide up to a maximum of 2% onsite renewable energy generation. The remaining 5.5% gap will require major investments and long-term purchase agreements (up to 40 years). A privately operated wind farm installed on INL property would require \$15M in supporting infrastructure for the project to be commercially viable. Onsite solar installation would require over \$35M, plus the cost of maintaining an owned solar generating facility.	High See Non- Attainment Issue statement

SSPP Goal	S-1. (continued). DOE Goal	Performance Status	Planned Actions and Key Issues	Risk of Non- Attainment
1.6	10% annual increase in fleet alternative fuel consumption through FY 2015 relative to a FY 2005 baseline.	The INL Site has exceeded the FY 2015 goal by increasing alternative fuel 210% relative to FY 2005. In FY 2011 the INL Site used 236,889 gasoline gallon equivalents of alternative fuels. This represents an increase of 210% over the FY 2005 use, and a 39% increase over FY 2010 use.	The INL Site will continue to purchase alternative fuel vehicles in support of this goal. INL will optimize the fleet through bus and heavy truck replacements that are more efficient and operate on biodiesel. However, recent DOE-HQ and GSA direction has placed an emphasis on hybrid vehicle purchases. Hybrid vehicles are not flex fuel capable, so future alternative fuel consumption may decrease.	Low
1.7	2% annual reduction in fleet petroleum consumption through FY 2015 relative to a FY 2005 baseline. In FY 2011, the INL Site used 862,527 gasoline gallons equivalent of petroleum, an 8.1% reduction from FY 2005. The INL Site will continue to obtain increasingly fuel-efficient buses, procure efficient light-duty vehicles, and research the feasibility of implementing alternative fuel for bus operations. AMWTP and ICP contract completion will contribute to further reductions, helping exceed the goal.		Medium	
1.8	75% of light-duty vehicle purchases must consist of alternative fuel vehicles (AFVs) by FY 2015. The INL Site acquired 101 light-duty vehicles in FY 2011, 47 are flex-fuel (46.5%), 46 are hybrid (45.5%) and 8 are gasoline (8%). Of the 101 acquired, 92% are either AFVs or hybrid vehicles. The INL Site will continue to replace the current fleet with AFVs as General Services Administration (GSA) allows. However, hybrid vehicles are not AFVs and DOE-HQ is mandating hybrid vehicles be purchased. As seen in the FY 2011 status, this greatly affects the percentage. A decision is needed on which vehicle type is more important: AFV or hybrid.		Medium Based on directives and vehicles available from GSA.	
1.9	Reduce fleet inventory by 35% within the next 3 years relative to a FY 2005 baseline.	The INL Site reduced vehicle fleet inventory 15% in FY 2011 and is on track to meet the 35% reduction by FY 2015, including interim goals.	The INL Site is on track to meet the 35% reduction commitment made to DOE-HQ. INL performed a 2-year utilization study and has begun reducing the size of the INL fleet while ensuring the ability to meet the INL mission. Completion of the AMWTP and ICP contracts will remove dozens of vehicles from the fleet inventory.	Low

SSPP	S-1. (continued).			Risk of Non-
Goal	DOE Goal	Performance Status	Planned Actions and Key Issues	Attainment
2.1	13% Scope 3 GHG Reduction by FY 2020 from a FY 2008 baseline.	The INL Site reduced Scope 3 GHG emissions 23.3% in FY 2011 compared to FY 2008 according to the data in the CEDR, exceeding the 13% reduction goal 9 years early.	The INL Site will reduce Scope 3 GHG emissions primarily through employee commute reduction tactics and employee travel reduction tactics.	Low
3.1	15% of existing buildings greater than 5,000 gross square feet (GSF) are compliant with the GPs of High Performance Sustainable Buildings (HPSB) by FY 2015	The INL Site has 2% of existing facilities that are compliant with the GPs. AMWTP and ICP project completion do not involve bringing facilities in compliance with the GPs. Although the INL Site requires only 26 facilities to achieve the GPs (15% of the entire INL Site), INL identified 27 facilities with the highest probability of meeting the GPs. These facilities were entered into Portfolio Manager, are planned for meter installations, and are included in plans for energy and efficiency upgrades. Of these 27 facilities, two are currently Leadership in Energy and Environmental Design (LEED TM) Gold certified, four are in construction and are awaiting LEED TM Gold certification, and the balance are being worked for Guiding Principle implementation.	All enduring infrastructure at Central Facilities Area and the Advanced Test Reactor Complex (ATR), and low security facilities at the Specific Manufacturing Complex (SMC) were evaluated as part of developing INL ESPC Project 3. The five GPs are planned for implementation through the ESPC, although not at EM facilities. In FY 2012, INL will implement projects in Idaho Falls (IF) Facilities including IF-616 (WCB), IF-654 (EROB), and IF-601 (ROB) that will help these buildings to obtain a passing Energy Star rating score and will be further evaluated using Portfolio Manager. INL is planning to certify IF-663 (RSF) and IF-654 (EROB) in FY 2012 as meeting the GPs using Portfolio Manager, an increase of 1%. Non- Attainment Issue: The INL Site is responsible for obtaining Guiding Principle certification on 15% of the INL Site Buildings (26 total based on current enduring infrastructure numbers). AMWTP and ICP will not contribute to this goal due to DOE-HQ direction that EM facilities at the site will not be a part of the ESPCs. INL had planned on obtaining GP certification on 16 buildings, which equates to 15% of the INL controlled buildings. Although a new plan is in place to achieve GP compliance on all 26,	High See Non- Attainment Issue statement

Table ES-1. (continued).

SSPP Goal	DOE Goal	Performance Status	Planned Actions and Key Issues	Risk of Non- Attainment
			the remaining 10 facilities were added in FY 2012 to the INL total and may not reach GP implementation until after FY 2015. Energy efficiency project funding, meter installation, and operating considerations may cause the new planned GP implementation date to slip 1 or 2 years for the additional 10 buildings.	
3.2	All new construction, major renovations, and alternations of buildings greater than 5,000 GSF must comply with the GPs and where the work exceeds \$5M, each are LEED TM NC Gold certification or equivalent The INL Site ensures all new construction, major renovations, and alternations of buildings greater than 5,000 GSF comply with the GPs and where the work exceeds \$5M, are LEED TM NC Gold certified or equivalent. The INL Technical Support Building (TSB) at the ATR Complex received LEED TM certification on March 31, 2011.		AMWTP and ICP project completion do not involve certification of temporary facilities. However, INL continues to pursue certification at enduring facilities. IF-683, Radiological Environmental Sciences Laboratory (RESL) will be certified at LEED TM Gold in FY 2012 and IF-685 (ESL) is under construction and is expected to be submitted for LEED TM Gold in FY 2013. The INL Site Ten Year Site Plan (TYSP) has institutionalized sustainability as a core driver during campus and building planning.	Low

SSPP Goal	DOE Goal	Performance Status	Planned Actions and Key Issues	Risk of Non- Attainment
4.1	26% water intensity reduction by FY 2020 from a FY 2007 baseline.	The INL Site has reduced water use intensity by 4% and total water pumped by 14.5% as compared to the FY 2007 baseline. A water assessment was performed by a water assessment team from Pacific Northwest National Laboratory (PNNL) was initiated at ATR Complex to identify reduction opportunities.	The INL Site will continue to develop and install projects that conserve water, primarily through ESPC project development at the ATR Complex and Central Facilities Area and leveraging assessments done by PNNL. AMWTP and ICP contract completion will contribute to further reductions, (AMWTP completion -7.1 M gal. annually; Liquid Waste Management System-56 M gal. annually). D Non-Attainment Issue: Due to low cost water and electricity, payback on water efficiency projects can be as much as 200 years, unreasonable to taxpayers and detrimental to INL missions. The INL Site is unlikely to achieve this goal. Retrofits on existing industrial process, primarily at the ATR Complex, are estimated at over \$75M. The INL Site estimates a water intensity reduction of 10%—12% by FY 2020.	High See Non- Attainment Issue statement
4.2	20% water consumption reduction of industrial, landscaping, and agricultural (ILA) water by FY 2020 from a FY 2010 baseline.	ILA water is not applicable to the INL Site. All water obtained by the INL Site is obtained from the Snake River Plain Aquifer and is potable. The INL Site does not have access to any non-potable water supplies.	NA.	Low
5.1	Divert at least 50% of non-hazardous solid waste, excluding construction and demolition debris, by FY 2015.	The INL Site diverted 15.3% of its non-hazardous solid waste in FY 2011. INL diverted 24.6% of municipal solid waste from the landfill in FY 2011.	The INL Site will continue to evaluate potential outlets and the expansion of recyclable waste streams and to further increase the amount of wastes diverted from the landfill.	Medium

rable E	S-1. (continued).			
SSPP Goal	DOE Goal	Performance Status	Planned Actions and Key Issues	Risk of Non- Attainment
5.2	Divert at least 50% of construction and demolition materials and debris by FY 2015.	The INL Site diverted 12% of its construction and demolition (C&D) materials in FY 2011. The majority of AMWTP and ICP C&D waste is prohibited from offsite reuse due to the DOE moratorium. INL diverted 39.4% of the construction and demolition waste during FY 2011.	The INL Site will work to incorporate additional materials into current C&D waste diversion process and will take actions to accurately measure wood waste diverted to the wood chipper.	Medium
6.1	Procurements meet track this data. INL sustainability requirements and include sustainable acquisition clause (95% each year). AMWTP and ICP do not track this data. INL implemented a new automated tracking process in FY 2011 and preliminary numbers show that 31% of the contracts contained the sustainable acquisition clause. INL is incorporating numerous changes to improve the Sustainable Acquisition Program including procedures, policies, and enhanced work processes that increase the visibility, availability, and use of sustainable products		changes to improve the Sustainable Acquisition Program including procedures, policies, and enhanced work processes that increase the visibility, availability, and use of	Medium
7.1	are metered to measure a two Data Centers and is connected to the building metering for the second and data center at the Information		The INL Site plans to implement metering for the second and last data center at the Information and Operations Research Center.	Low
7.2	annual weighted Performance Computing w		The PUE for the second data center will be calculated when full metering is implemented.	Low
7.3	Electronic Stewardship – 100% of eligible PCs, laptops, and monitors with power management activity implemented and in use by FY 2012.	INL and ICP both won the FEC Bronze award in FY 2011. Power management controls are in place on the majority of eligible computer systems. At INL, 100% of eligible PCs have power management controls.	Numerous actions are planned for FY 2012 that will continue to support the Federal Electronics Challenge and work towards achieving the FY 2012 Power Management Goal.	Medium

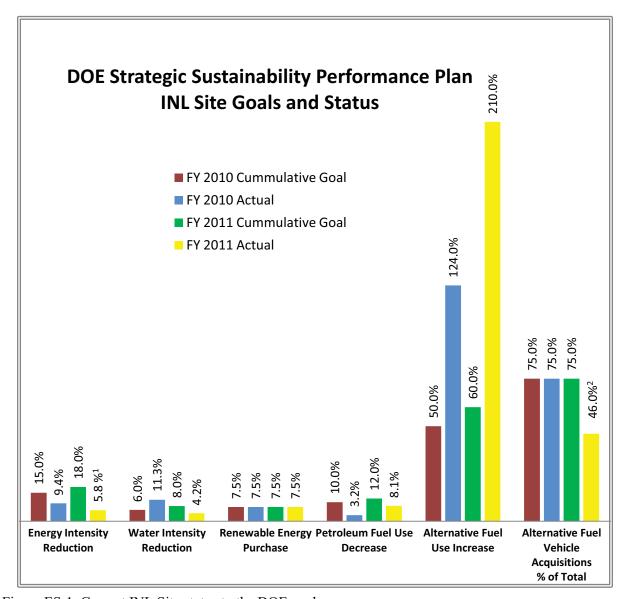


Figure ES-1. Current INL Site status to the DOE goals.

Figure ES-1 shows the INL Site cumulative goal and status for FY 2010 and FY 2011. The cumulative goals are based on individual baseline years as required in Executive Orders.

- 1. Energy intensity normalized for weather would be -10.5%.
- 2. Alternative fuel vehicle purchases are down significantly due to the DOE requirements to procure hybrid light duty vehicles when available. The INL Site acquired 101 light-duty vehicles in FY 2011, 47 are flex-fuel (46.5%), 46 are hybrid (45.5%), and 8 are gasoline (8%). Of the 101 acquired, 92% are either AFVs or hybrid vehicles.

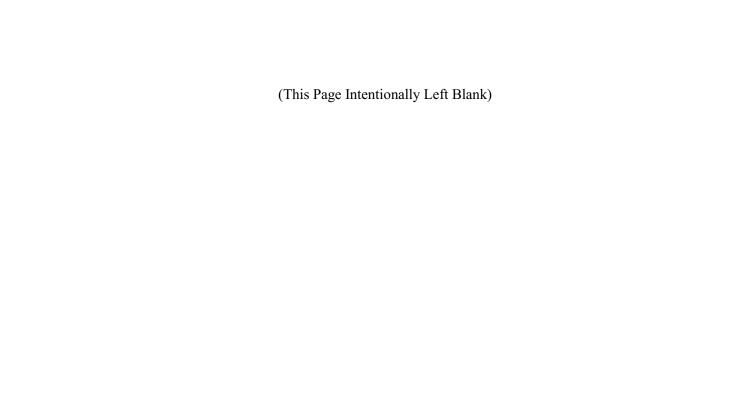
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ACRONYMS

AFV alternative fuel vehicle

AMWTP Advanced Mixed Waste Treatment Project
ARRA American Recovery and Reinvestment Act

ATR Advanced Test Reactor

BEA Battelle Energy Alliance, LLC
BPA Bonneville Power Administration

Btu British thermal unit

C&D Construction and Demolition

CAES Center for Advanced Energy Studies

CD-2 Conceptual Design

CDP Calcine Disposition Project

CEDR Consolidated Energy Data Report

CFA Central Facilities Area

CNG Compressed Natural Gas

CRAC Computer Room Air Condition

CUI controlled unclassified information

D&D Decontamination and Dismantlement

DOD Department of Defense

DOE Department of Energy

DOE-ID Department of Energy Idaho Operations Office

DRI Desktop Refresh Initiative

E-85 Ethanol 85 (alternative fuel that is 85% ethanol and 15% gasoline)

EBR-I Experimental Breeder Reactor 1

ECM Energy Conservation Measure

EM Environmental Management

EMS Environmental Management System

EO Executive Order

EPA Environmental Protection Agency

EPEAT Electronic Product Environmental Assessment Tool

EROB Engineering Research Office Building

ESCo Energy Services Contractor ESL Energy Systems Laboratory

ESPC Energy Savings Performance Contract

FAST Fleet Automotive Statistical Tool

FEC Federal Electronics Challenge

FEMP Federal Energy Management Program

FIMS Facilities Information Management System

FIRP Facility Infrastructure Revitalization Program

FY Fiscal Year

GHG greenhouse gas

GIS Geospatial Information System

GP Guiding Principle

GPS Global Positioning System

GSA General Services Administration

GSF Gross Square Feet

HDD Heating Degree Days

HEV hybrid electric vehicle

HPC High Performance Computing

HPSB high performance and sustainable building

HQ Headquarters

HWMA Hazardous Waste Management Act

ICP Idaho Cleanup Project

ILA industrial, landscaping, and agricultural

IM Information ManagementINL Idaho National Laboratory

INTEC Idaho Nuclear Technology and Engineering Center

IORC Information Operations and Research Center

IRC INL Research Center

ISMS Integrated Safety Management Systems

IT Information Technology

IWTU Integrated Waste Treatment Unit

LCD Liquid Crystal Display

LEEDTM Leadership in Energy and Environmental Design

LNG Liquefied Natural Gas

MFC Materials and Fuels Complex

MIT Massachusetts Institute of Technology

MT metric tons

MTR Materials Test Reactor

NRF Naval Reactors Facility

OMB Office of Management and Budget

ORNL Oak Ridge National Laboratory

PDU Process Demonstration Unit

PHEV Plug-in Hybrid Electric Vehicle

PNNL Pacific Northwest National Laboratory

PUE Power Utilization Effectiveness

R&D Research and Development

RAMP Roof Asset Management Program

RCRA Resource Conservation and Recovery Act

RDD&D Research, Development, Demonstration, and Deployment

REC Renewable Energy Certificate

REL Research and Education Laboratory

RESL Radiological Environmental Sciences Laboratory

RFI Request for Information

RFID Radio Frequency Identification

RFP Request for Proposal

ROB Research Office Building

RWMC Radioactive Waste Management Complex

SMC Specific Manufacturing Capability

SSPP Strategic Sustainability Performance Plan

TSB Technical Support Building

TTAF Test Train Assembly Facility

TYSP Ten-Year Site Plan

UESC Utility Energy Savings Contract

UPS Uninterruptable Power Supply

USGBC United States Green Building Council

VAM Vehicle Allocation Methodology

VM Virtual Machine

WAPA Western Area Power Administration

WCB Willow Creek Building

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1. GOAL PERFORMANCE REVIEW AND PLANS

For the purposes of this document, the "INL Site" is considered all operating contractors and the Department of Energy Idaho Operations Office (DOE-ID), and includes the industrial complexes located west of Idaho Falls and the Idaho Falls buildings. Idaho National Laboratory (INL) is considered to be those facilities operated by Battelle Energy Alliance, LLC (BEA). The Advanced Mixed Waste Treatment Project (AMWTP) and Idaho Cleanup Project (ICP) are referred to by their noted acronyms and include all facilities under their individual responsibility.

The Environmental Management Mission assumptions for this Plan include the Advanced Mixed Waste Treatment Project (AMWTP) ceasing operations and be in a cold, dark, and dry status by FY 2018; the remaining Idaho Cleanup Project (ICP) operations at the Radioactive Waste Management Complex (RWMC) will be complete by FY 2018 with buildings in a cold, dark and dry status; the Idaho Nuclear Technology Center (INTEC) liquid waste management system operations will be discontinued by FY 2015; and the INTEC New Waste Calcine Facility will be demolished by FY 2015.

1.1 Scopes 1 and 2 Greenhouse Gas Reduction

28% Scope 1 & 2 GHG reduction by FY 2020 from a FY 2008 baseline.

Executive Order (EO) 13514 mandates that agencies develop specific greenhouse gas (GHG) reduction targets. Department of Energy (DOE) has set a reduction target of 28% for Scope 1 and 2 GHGs. The EO sets Fiscal Year (FY) 2008 as the baseline year against which reductions will be measured.

The INL Site reported Scope 1 and Scope 2 GHG emissions for the baseline year, FY 2008, and annually thereafter. Scope 1 and Scope 2 are defined as:

- Scope 1. Direct or INL Site-owned emissions that are produced onsite, such as stationary combustion (from fuel combustion), mobile combustion (from fleet vehicles), and fugitive emissions (from refrigerants, onsite landfills, and onsite wastewater treatment). These include emissions that may benefit another entity or contractor, but for which the INL Site controls or owns the associated process.
- Scope 2. Indirect or shared emissions produced by INL Site's electricity, heat, and steam purchases. (Note that INL Site did not purchase heat or steam during FY 2009 through FY 2010.)

The INL Site contractors' Environmental Management Systems (EMS) provide the framework and process for evaluating and monitoring Scopes 1, 2, and 3 GHG emissions and related reduction activities. On an annual basis, appropriate sustainability targets are developed and monitored through the EMS to support the overall reduction in GHG emissions.

The challenge is to minimize the impact of operations while increasing the growth of the Laboratory, balanced with EM closure activities. The INL Site is integrating environmental performance improvement in the areas that matter most to its stakeholders and the Laboratory, including minimizing the environmental footprint, taking a progressive approach to climate change, and championing energy conservation.

1.1.1 Performance Status

Based on data entered into the CEDR for FY 2011, the INL Site has reduced Scope 1 greenhouse gas emissions 24.8%. (FY 2008 – 35,176.84 MT $\rm CO_2e$ and FY 2011 – 26,456.46MT $\rm CO_2e$), reduced Scope 2 greenhouse gas emissions 9.5% (FY 2008 – 94,919.29MT $\rm CO_2e$ and FY 2011 – 85,941.06MT $\rm CO_2e$). The combined Scope 1 and Scope 2 emissions decreased 22.5% in FY 2011 as reported by the SPO.

INL completed an update to the FY 2008 GHG baseline based on updated guidance. Minimal changes occurred as a result of this update. Additionally, INL completed comprehensive inventories for FY 2009 and FY 2010.

As found in Table 1, each Scope 1 and Scope 2 category is listed for FY 2008 and FY 2011 and the calculated emission needed for each by FY 2020. FAST data, a Scope 1 emission, is not included in this table.

Table 1. INL Site Scope 1 and 2 GHG calculation results for FY 2008 and FY 2011, and the FY 2020

Goal, by emissions category.

Scope	Emissions Category	FY 2008 Baseline (MT CO ₂ e)	FY 2011 Actual (MT CO ₂ e)	FY 2020 Reduction Goal (MT CO ₂ e)
1	Stationary Combustion	28,590.9	19,886.7	20,585.5
	Fugitive Emissions: Refrigerants	332.4	606.5	239.3
	Fugitive Emissions: Onsite Landfill	5,972.4	5702.1	4300.1
	Fugitive Emissions: Onsite Wastewater Treatment	281.1	261.2	202.4
	Scope 1 Total	35,176.8	26,456.5	25,327.3
2	Purchased Electricity (includes owned Transmission & Distribution Losses)	94,919.3	85,941.1	68,341.9
1&2	Grand Total	130,096.1	112,397.5	93,669.2

Many factors influence the INL Site's GHG emissions, including the large land area on which the Laboratory's facilities are located. The area requires long commutes and an extensive fleet to provide transportation for desert site workers, and contains many antiquated inefficient facilities built before the current appreciation for energy efficiency and high-performance design. These factors tie directly into the following conclusions from the INL Site's baseline GHG inventory:

- Electricity is the largest contributor to the INL Site's GHG inventory, with over 60% of the net anthropogenic CO2e emissions from Scopes 1 and 2
- Other sources with high emissions were stationary combustion, and fugitive emissions from the onsite landfills
- Among the sources with low emissions within Scopes 1 and 2 were fugitive emissions from refrigerants and onsite wastewater treatment.

1.1.2 Planned Actions

The INL Site will continue to implement projects that reduce electricity and fuel usage, reducing corresponding Scope 1 and Scope 2 emission reductions. ICP will continue its closure mission, discontinuing processes and making facilities inactive and cold, dark and dry; or demolishing what is no longer needed. Knowing the target emission for each as found in the INL GHG Reduction Strategy helps prioritize and plan projects accordingly.

Mobile Combustion Reduction tactics include:

• Take advantage of mass transportation and shuttles

Significant petroleum reduction and associated GHG reduction could be realized by moving the AMWTP contract force away from the current vanpool system to the existing INL bus operation. A majority of the AMWTP work force could be absorbed into the current bus operations schedule (i.e., fill the empty seats on buses currently traveling to/from the Site).

• Consolidate trips.

INL is working with the Idaho Transportation Department to establish a ride-share pool for INL employees.

INL has consolidated buses used to shuttle shift workers and bus drivers into the regular INL shuttle schedule. In addition, INL monitors shuttles and other runs, and eliminates or consolidates runs with low utilization.

• Eliminate trips by using tools such as video and Web conferencing for meetings.

The use of "Go to Meeting" and other similar Web conferencing tools are available and use is expanding at INL.

• Use alternative modes of transportation such as bicycles and low-speed vehicles as appropriate.

Low-speed vehicles are available and in use inside Site areas.

Bicycle pools could be established for transportation between town campuses using a model implemented by Oak Ridge National Laboratory (ORNL).

• Provide right size fleet.

Decrease the number of "permanently assigned" vehicles and consolidate vehicles into pools located at major INL Site campuses. Implement an automated pool check-out/check-in system such as the Asset Works "Key-Valet" system that is compatible with the current INL vehicle reservation system.

Restrict use of Site fleet to Site activities. For example, vehicles needed for environmental monitoring would be based at the Site locations and trips would start/end from ATR, CFA, MFC, etc., and not be used to transport employees to/from Idaho Falls. Employees could use bus routes and shuttles to travel between town and Site.

Fugitive emission reduction tactics include:

- Work with recycling coordinator to identify waste diversion opportunities, including increasing the
 types and quantities of items sent for recycling, and implementing composting. These activities will
 assist with meeting the EO 13514 waste diversion goals.
- Investigate installing a gas collection system at the onsite landfill to use as an energy source.
- Electricity emission reduction tactics include installing onsite renewable energy projects as cost effective, although there are no plans or funding to install in the near term.

- Use the following tactics to reduce direct purchased electricity:
 - Install smart meters in Idaho Falls buildings (scheduled for FY 2012)
 - Satisfy sustainable acquisition requirements to purchase Energy Star and Federal Energy Management Program (FEMP) devices (EO 13514 requirement)
 - Meet green building goals for new and existing buildings (Guiding Principles and Leadership in Energy and Environmental Design [LEEDTM] Gold certification)
 - Continue educational campaign to change employee behaviors (turn off lights and computers when leaving at end of shift, utilize power management when available, avoid using space heaters, personal fridges, etc.)
 - Continue to pursue Energy Savings Performance Contract (ESPC) Contract 3
 - Upgrade Idaho Falls facilities using either Utility Energy Savings Contract (UESC) funds or internal upgrade program.
- REC purchase increase tactic:
 - The INL Site will continue to meet the minimum requirements of purchasing 7.5% of the electric energy usage in equivalent RECs. However, INL has committed to increase purchase of RECs starting in FY 2012 to 10% of the INL electric usage. Although the increase does not contribute to the GHG reduction goal, it does demonstrate INL's commitment to climate change adaptation and strategic leadership. The calculation method is based on the following: assume 10% of the previous year's purchased electricity total will be purchased as RECs in the current year (i.e., FY 2012 REC purchase is 10% of FY 2011 total purchased electricity).

1.2 Energy Intensity Reduction

30% energy intensity reduction by FY 2015 from a FY 2003 baseline.

The INL Site goal for energy usage is a 30% reduction of energy intensity by FY 2015, as compared to the FY 2003 energy intensity baseline. Energy intensity is defined as energy use divided by building area and is measured in Btu/ft². On average, an annual energy use reduction goal of 3% supports meeting the overall goal and provides a means to measure and trend progress. Energy intensive loads that are mission specific are excluded from the goal. The ATR and its support facilities are currently excluded from the reporting goal but are not excluded from the responsibility to reduce energy use and GHGs where practicable.

Energy sources affected by this goal include electricity, natural gas, fuel oil, liquefied natural gas (LNG), and propane. Methods to reduce energy usage include capital project upgrades, operational modifications, and behavior changes by the INL workforce.

The INL Site energy intensity for FY 2011 was 173,194 Btu/ft² as compared to 183,471 Btu/ft² in FY 2003 for a calculated reduction of 5.6%. This reduction falls far short of the desired 18% cumulative reduction goal for FY 2011. However, the INL Site normalizes energy intensity each year to provide for a weather-related adjusted comparison with the base year. To make this correction, the portion of energy used for space conditioning (defined as 43% of the total according to DOE's Energy Information Administration) is adjusted to the weather conditions for the base year. In FY 2011, there were 8,970 Heating Degree Days (HDDs) as compared to only 7,892 in FY 2003. In this comparison, the energy intensity would decrease had temperatures been as warm in FY 2011 as they were in FY 2003. The result is a corrected energy use intensity of 164,244 Btu/ft², and when compared to the base year energy intensity of 183,471 Btu/ft², it calculates to an actual 10.5% reduction (see Table 2).

Table 2. Energy intensity normalization for weather factors.

Energy Intensity FY 2003	Energy Intensity FY 2011	HDDs FY 2003	HDDs FY 2011	Normalized Energy Intensity FY 2011
183,471 Btu/ft²	173,194 Btu/ft²	7,892	8,970	164,244 Btu/ft²
(Baseline Year)	(5.6% Reduction from FY 2003)	(Baseline Year)	(Over 1,000 HDD increase)	(10.5% Reduction from FY 2003)

Note: The Normalized Energy Intensity is calculated to show what the energy intensity would have been in FY 2011, had the weather factors been the same as they were in FY 2003. This method provides a more accurate picture of energy use from year to year.

Due to the nature of the various INL Site missions, many operations can be cyclical and result in varying usages of energy. As facilities are removed or processes are modified, the INL Site energy usage intensity can vary seemingly unrelated to actual overall reduction efforts. In FY 2011, additional Decommissioning and Demolition (D&D) work continues to remove low energy use facilities operating in a standby mode. As the INL Site square footage decreased, the energy use intensity did not decrease as much as desired, even though total energy use declined.

There is one major new project under development at the ICP. Construction of the Integrated Waste Treatment Unit (IWTU) was completed in FY 2011 and houses the treatment process for treating the remaining wastes in the Tank Farm Facility. This treatment process is slated to begin hot operations in second quarter of FY 2012. The treatment process will use significant amounts of water and electricity. The facility does not currently have the capability for individual building metering and is captured in the overall Idaho Nuclear Technology Center (INTEC) metering. While an increase in INTEC energy use will occur, this process is expected to operate for less than 1 year to complete its mission, at which time the facility energy use should decrease back to the current INTEC load. When the IWTU becomes operational, it will be included on the INL Site Excluded Facilities input.

A future facility is currently being designed for the treatment of the calcine solids stored in the Calcine Solids Storage Facility located at INTEC. The Calcine Disposition Project (CDP) is planning to use a portion of the IWTU facility for this project. The CDP will also be an energy intensive treatment process that could be operational by FY 2020. The CDP will have individual energy metering capability and the expectation is that this facility will be exempted from the energy reduction goals. The energy metering capability will enable the facility use to be subtracted from the overall INTEC use so that progress on energy reduction at INTEC can be monitored.

The INL Site is planning for significant growth to further its missions with additional process related facilities at the major desert site locations and additional office and laboratory facilities at Idaho Falls locations. The INL TYSP (DOE/ID-11449) provides an overview and details of conceptual laboratory growth. Several of these new facilities are identified in the New Buildings worksheet of the Consolidated Energy Data Report (CEDR).

1.2.1 Performance Status

To meet the Strategic Sustainability Performance Plan (SSPP) energy goal, the INL Site should be at an 18% reduction by the end of FY 2011 as compared to the established FY 2003 baseline. As demonstrated through data entered into the CEDR and corrected for weather related factors, the INL Site is actually at a 10.5% in energy reduction, which also represents a 1.1% reduction from FY 2010.

INL made progress in FY 2011 with final construction of the MFC ESPC project. Additional energy reductions will be realized in FY 2012 after a full year of operations of the new boilers.

1.2.2 Planned Actions

ICP will contribute to energy intensity reductions in two primary ways. ICP has reduced building footprint by 857,428 ft² since FY 2003 and is discontinuing operations which reduces energy consumption. Additional projects such as the roof upgrades and heating system upgrades will also be completed in the near future.

The INL Site capital project upgrades are funded primarily through alternative funding mechanisms that include ESPC and UESC. They both use external (non-DOE) funding for energy-related upgrades and are paid back over time using the energy cost savings generated by the project. Both are time consuming and have requirements that limit effectiveness. The UESC process commenced on several owned and leased Idaho Falls facilities, but a major program requirement states that the payback must not exceed the length of the building lease. This greatly limits implementation as most leased facilities have 5 to 10 year leases and most payback calculations are 7 to 15 years. Still, the INL Site is actively pursuing these two alternative funding strategies to obtain additional energy savings. Finally, the INL Site will maximize the use of available utility incentive programs to help fund both internal and alternatively funded projects.

INL will supplement the ongoing ESPC project by providing Strategic Investment Funding (SIF) to implement projects that are either not readily adaptable to ESPC projects, or directly influence the efficiency of buildings that INL is pursuing the Guiding Principles. The SIF will be provided for each year through FY 2015.

The following projects were identified that will contribute to continued energy reductions for the INL Site:

- Using SIF for FY 2012, installation of up to nine energy and water reduction projects in Willow Creek Building (WCB), Engineering Research Office Building (EROB), and the Research Office Building (ROB). These projects were developed during FY 2011 for implementation in FY 2012.
 - 1. WCB Chiller Replacements
 - 2. EROB CO₂ Controls
 - 3. WCB Water Fixture Replacements
 - 4. IRC (IF-602) Water Fixture Replacements
 - 5. WCB Lighting Fixtures
 - 6. WCB Lighting Controls
 - 7. WCB Exterior Lighting Fixtures
 - 8. ROB (IF-601) Exterior Lighting Fixtures
 - 9. IRC (IF-603) Motor/Controls.
- ESPC development continues including completion of the Investment Grade Audit for all enduring facilities at CFA, ATR-Complex, and selected facilities at the Specific Manufacturing Capability (SMC) facility. Energy Conservation Measures (ECM) being pursued include lighting, HVAC, and building envelope upgrades, boiler plant elimination at CFA, boiler plant controls at SMC, back generator installation at ATR Complex, solar walls, and possibly small renewable energy generation.
- A fourth ESPC project is estimated to cost \$42–\$52M based on historical data from ESPC 1 and ESPC 2.
- ICP planned actions for energy reduction activities after FY 2011consist of continued D&D, which will result in a projected net reduction of building square footage for the INL Environmental Management (EM) program by the end of FY 2020 of 118,218 ft². AMWTP completion will place 12

facilities in a cold, dark, and dry status. ICP will complete several processing operations including ceasing operations of the Liquid Waste Management System.

• An ESPC was initiated for EM operations at INTEC, but was put on hold due to uncertainties with building lifetimes.

INL identified several projects that would contribute to the goal, but are either not economical or payback calculations prohibit installation based on DOE-HQ guidance. Projects are at numerous Idaho Falls facilities, leased and owned. Total estimated cost for the following 59 projects is \$12.7M. Project include:

- Replace three 20 ton, RTU-style single package system with three variable volume systems with and ARI Energy Efficiency Rating (EER) of 12.0 (13.1 IPLV) and with a gas heating efficiency of 82%.
- Replace one 3 ton, two 7.5 ton, and one 10 ton heat pumps with new high efficiency heat pumps with a minimum Coefficient of Performance of 4.0.
- Replace the existing four heat pumps with new high efficiency heat pumps with a coefficient of performance of 4.0.
- Install air-to-air heat exchangers in each of the three HVAC zones with a minimum of 100, 300, and 750 CFM.
- Install new 5hp VFDs on the MOAU-1 and MOAU-2 fan motors and program/control with the new CO₂ sensors.
- Install destratification fans and infrared heaters in each of the two high bay areas to circulate the air and eliminate temperature stratification.
- Replace 15 exterior wall pack fixtures with new 9W LED Fixtures.
- Replace 11 walkway lights with new 9W LED lamps and eight parking lot fixture heads with new 30W LED or 250W induction lamp fixture heads.
- Replace 17 exterior wall pack fixtures with new 6W LED Fixtures
- Replace 15 exterior wall pack fixtures with new 28W LED fixtures and 12 single-light and four double-light parking lot fixture heads with sixteen 60W LED or 400W induction lamp fixture heads.
- Replace 13 exterior wall pack fixtures with new 20W LED fixtures and seven parking lot fixture heads with new 60W LED or 300W induction lamp fixture heads.
- Replace seven exterior wall pack fixtures with new 20W LED fixtures.
- Replace 65 exterior light fixtures with twenty-six 9W LED, eleven 60W LED or 100W induction lamp, four 20W LED, seven 30W LED, and seventeen 100W LED or 300W induction lamp fixtures.
- Replace 12 exterior light fixtures with new 9W LED fixtures.
- Replace 10 exterior light fixtures with new 9W LED fixtures.
- Replace 27 exterior wall pack fixtures with eleven 25W, fourteen 28W, and two 30W new LED fixtures. Replace 43 parking lot fixture heads with new 100W LED or 250W induction lamp fixture heads.
- Replace seven exterior wall pack fixtures with new 9W LED fixtures.
- Replace 11 exterior wall pack fixtures with new 9W LED fixtures.
- Replace eight exterior wall pack fixtures with new 39W LED fixtures.
- Replace six exterior wall pack fixtures with new 9W LED fixtures.

- Install 118 wall and ceiling mount occupancy sensors for lighting control in offices, break rooms, rest rooms, conference rooms, and electrical and mechanical rooms.
- Install 133 wall and ceiling mount occupancy sensors for lighting control in offices, break rooms, conference rooms, and mechanical rooms.
- Retrofit 1,118 T12 fluorescent fixtures with new electronic ballasts and T8 lamps.
- Retrofit two hundred twenty-seven 40 and 60W task and spotlights with 12W compact fluorescent lamps.
- Retrofit 170 fluorescent fixtures with new electronic ballasts and T8 lamps. Replace 15 exit sign fixtures with new LED fixtures.
- Install 14 wall and ceiling mount occupancy sensors for lighting control.
- Replace one 1hp and one 30hp pump motors with new premium efficiency motors.
- Replace two 2hp, four 3hp, eight 5hp, six 7.5hp, six 10hp, four 15hp, four 20hp, one 25hp, six 30hp, two 40hp, and one 50hp motors with new premium efficiency motors.
- Replace one 3hp, three 7.5hp, four 15hp, one 20hp, and two 25hp motors on end suction pumps with new high efficiency motors.
- Replace three 5hp, seven 7.5hp, four 10hp, four 20hp, two 30hp, and one 40hp in-line fan motors with new high efficiency motors.
- Replace one 1hp, one 1.5hp, one 3hp, and one 5hp general-purpose fan motors with new high-efficiency motors.
- Install one VFD on the 5hp HVAC motor on the single package RTU and three 7.5hp fan motors.
- Install one 7.5hp VFD on P-2, one 15hp VFD on P-4, one 20hp VFD on CT-1, one 40hp VFD on CT-2, two 15hp VFDs on the main hot water heating pumps, and two 10hp VFDs on the Data Pump House condenser pumps.
- Replace the current boiler with a new High Efficiency Condensing Boiler. The boiler capacity will be increased from 1,400 MBH to 2,000 MBH. (Consider several small packaged boiler-system efficiency and mechanical room access).
- Install VFDs on pump motors and HVAC motors for air handlers 1–6, cooling systems and hot water heating system pumps, heat recovery system pumps and cooling tower fan motors and upgrade Carrier I-VU controls to facilitate control of the new VFDs.
- Install usage based controls (UBC) variable flow Carrier I-VU proximity controls on the lab fume hoods 72 and new Carrier I-0VU controls for the existing Phoenix airflow control valves 237, for the lab area with electronic to pneumatic transducers.
- Replace the existing boilers with new High Efficiency Condensing Boilers capable of 5,000 MBH.
- Replace the existing and install one additional evaporative fluid-cooling tower, replace the associated two heat exchangers with two new plate and frame system heat exchangers and modify controls.
- Install 35 ground-mounted flat plate type solar collector heating panels to heat the water in one of the existing 56k gallon hot water storage tanks. This system would use glycol for heat transfer to a new 350-gpm pump system and heat exchanger.
- Replace one 5 ton, two 10 ton, one 12.5 ton, and eight 15 ton RTUs with new high efficiency natural gas/scroll compressor RTUs with an EER of 11 or above, variable speed fan control, modulating heating/cooling, economizers, and 12 CO₂ sensor controls.

- Remove five return air fans that are no longer required and increase the size of the return air ducting to reduce pressure drop.
- Install a new Carrier I-VU HVAC and Lighting control system for the entire building including five new lighting control panels.
- Add one Lieber Glycool second economizer cooling coil and controls to all nine of the existing Liebert systems.
- Replace two 2.5 ton, two 5 ton, two 6 ton, four 10 ton, one 15 ton, one 20 ton, and one 25 ton rooftop units (RTU) with new high efficiency units with economizers, CO₂ demand control ventilation, and electronic programmable controls (one space at a time).
- Enlarge the return air duct system for AC-24 and AC-25 serving the Enterprise Server room to address a recurring freeze problem during the heating season. Verify correct airflow through fire dampers and rebalance entire system.
- Convert the ceiling plenum supply system for the office areas into a ducted supply system for RTU units AC-11, 13, 14, 15, and 21 zones. This task will include 88 new diffusers, 32 return air grills, and 2,000 lbs of duct work and accessories.
- Replace the roof on approximately two-thirds of the roof and install R30 insulation throughout.
- Install on all air handler coils, 2-way automatic modulating control valves to be plumbed to hot water and chilled water coils. Included are five 2.5 inch, seven 4 inch, and five 6 inch valves.
- Install VFDs on two 25hp chilled water loop pumps, one 7.5hp hot water loop pump, one 20hp hot water loop pump, and two 7.5hp cooling tower pumps.
- Reprogram control system to achieve savings offered by the above controls modifications.
- Replace the existing chillers with two new 250 ton variable speed drive chillers with an efficiency rating of at least 0.55 kW/ton and with a 0.365 kW/ton ARI IPLV efficiency rating.
- Install four 15hp VFDs on the chilled water and condenser water pumps.
- Replace the existing electric boiler with a new 3,000 MBH high-efficiency, gas fired condensing boiler with an efficiency rating of 94.1%.
- Reprogram control system to achieve savings offered by the above equipment replacements.
- Remove the existing process hot water gas fired boiler, gas lines, and power feed.
- Retrofit 718 existing Kite Light fixtures with new 55W compact fluorescent lamps.
- Add nine new VAV boxes (approximately 3,000 CFM each), associated controls, and 5,800 lbs of additional galvanized steel ducting to split an existing nine zones into 18 zones to provide heating to areas served previously with the metal halide "kite lights".
- Install new glycol-to-chilled water heat exchangers and associated components on the two computer room/telecommunications room air conditioning units (Liebert/EdPac).
- Replace two single-stage 20hp air compressors with two new high efficiency single-stage 15hp variable speed drive, air-cooled, rotary screw compressors, and a 120 gallon receiver tank.
- Install a new second Liebert Glycool economizer cooling coil and controls to the glycol Drycooler system on the three Liebert data cooling systems.

1.2.3 Energy Intensity Projection

INL prepared an Energy Intensity Status and Forecast for DOE-ID on November 22, 2011 outlining various infrastructure and operational changes expected by FY 2015. This forecast indicates that the overall energy intensity will likely be a 22% reduction using the entire project funding resources currently identified. This first 22% of the 30% energy reduction goal will be achieved by completing identified ESPC projects, commissioning new efficient facilities, shutting down unneeded and completed operations, and implementing various internally funded projects. However, the final 8% will require major investments to implement yet-to-be identified opportunities. Table 3 provides the energy intensity forecast for FY 2003 (baseline year), FY 2011, and the energy intensity forecast for FY 2015.

should provide improvements from standby mode over the past several laboratory facilities (higher energy reduction in energy use. Does not RESL, ESL, REL & SIF. Upgrade Assumes that ESPC 3 is complete projects in WCB, EROB, and UB still likely be an estimated overall facilities. These upgrade projects currently exempted from the goal Building (TSB) is LEED TM Gold Total energy use is down at ATR where INL is now, but there will footage reduction of buildings in Complex, but significant square energy use and assumes that the years have increased the energy intensity than office buildings): and provides an additional 5% include ATR electricity as it is New, efficient, industrial, and providing a 5% reduction in new MFC Technical Support 5% increase from FY 2003. ESPC 2 is complete and is intensity of the remaining certified. % Change Forecast FY 2003 from 2% -30% 35% Forecast FY 2015 (Btu/ft^2) 99,895 197,402 171,125 % Change from FY 2003 18% 42% -26% FY 2011 (Btu/ft^2) 204,274 180,131 112,238 Table 3. Energy intensity forecast. Base Year FY 2003 (Btu/ft²) 126,616 95,070 275,256 ATR Complex Area MFC REC

Table 3. (continued).

Area	Base Year FY 2003 (Btu/ft²)	FY 2011 (Btu/ft²)	% Change from FY 2003	Forecast FY 2015 (Btu/ft²)	Forecast % Change from FY 2003	Comments
INTEC	305,550	235,272	-23%	230,567	-25%	INTEC's energy use is currently down significantly from FY 2003, and is expected to continue with additional reductions as more process are eliminated. An additional 2% energy reduction is estimated before the end of FY 2015. The new IWTU will be an energy intensive facility with a relatively short temporary mission and is planned to be excluded from the energy reduction goal when it comes online.
CFA	127,280	102,595	-19%	97,465	-23%	Assumes that ESPC 3 is complete and is providing an additional 5% reduction in energy use.
SMC/TAN	184,747	251,637	36%	245,346	33%	SMC is planning internally funded energy efficiency projects and is considering participating with ESPC 3. Estimating a 2.5% reduction in energy use over the next 4 years.
RWMC	78,227	122,020	26%	61,010	-22%	This estimate assumes that the current processes and mission are complete and that the buildings are in a standby mode, providing a 50% reduction in overall energy use as compared to current use.
Total Desert Site	196,491	173,323	-12%	151,948	-23%	Includes all of the major desert site areas except exempted ATR facilities.

Table 3. (continued).

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Area	Base Year FY 2003 (Btu/ft²)	FY 2011 (Btu/ft ²)	% Change from FY 2003	Forecast FY 2015 (Btu/ ft^2)	Forecast % Change from FY 2003	Comments
Total INL Site	174,997	157,811	-10%	136,667	-22%	This total includes all REC facilities and the major desert site areas. This is the final score that INL will be graded on for meeting the Strategic Sustainability Performance Plan (SSPP) goals.

Notes:

SMC/TAN and ATR Complex share a common phenomenon with regards to energy use intensity. Both areas have reduced their overall energy use, but have continued to decrease square footage, so the energy intensity has gone up rather significantly for both areas. Buildings with large square footages and low energy use in standby mode, such as the Materials Test Reactor (MTR) at ATR Complex and the Hot Shop Facility (TAN-607) at TAN, have been removed since base year FY 2003, contributing to the observed increase in energy use intensity. An example of ATR Complex is shown below:

	FY 2003	FY2011	% Change
Energy Use	59,850 MBtu	56,332 MBtu	6% reduction - Good
Square Footage (FIMS)	472,684 ft²	312,730 ft²	34% reduction - Also Good
Energy Use Intensity	126,616 Btu/ft²	180,131 Btu/ft²	42% increase - Unfortunate result for goal purposes

- INTEC has also experienced reductions in square footage, but the facilities removed were mostly active right up to D&D and were fully functional during base year FY 2003, so the energy intensity at INTEC has been predominantly reduced commensurate with the reduction in square footage. \ddot{c}
- Additional projects needed to address the estimated deficit of 8% toward the FY 2015 goal will be developed and included in the annual TYSP updates, and will be partially funded with INL's Strategic Investment Funding planned for Sustainability projects in each of the next 3 fiscal years. ω.

1.3 Utility Metering

Individual buildings or processes metering for 90% of electricity (by October 1, 2012); for 90% of steam, natural gas, and chilled water (by October 1, 2015).

Most of the INL Site buildings do not have meters installed. Meter installation has been performed by groups of buildings or facility area. Meter installations will be prioritized by the potential of the building to meet the Guiding Principles and the cost effectiveness of installing meters to meet the 90% metering goal.

In the latest Facilities Information Management System (FIMS) snapshot, the INL Site has over 900 real property assets such facilities or structures, all of which potentially use electricity. Electric meter installation can cost anywhere from \$5,000 to over \$25,000 per asset. Installation across the entire INL Site is both uneconomical and unrealistic. The INL Site has chosen to use DOE guidance and economic analysis to determine the most logical buildings to meter.

1.3.1 Performance Status

Using a combination of the DOE Metering Guidance (memorandum from Jennifer C. MacDonald, Direct Sustainability Performance Office, May 6, 2011), the guidance for Electric Metering in Federal Buildings (DOE/EE-0312), the DOE Buildings Electric Metering Guidance of September 27, 2006, and the FEMP Metering Best Practices (October 2007), the INL FY 2011 Metering Plan (PLN-3911) was prepared to identify the appropriate buildings for installing new utility Metering.

The results were clear. The INL Site will only install meters on facilities that have the greatest potential of achieving Guiding Principle compliance, are great then 5,000 ft², are not cold, dark, and dry, will be in use after FY 2020, and are not exempted from reporting.

The total electricity being metered for the entire INL Site is 53% with plans in place to meter 90% by FY 2015.

All INL Idaho Falls town locations are currently metered 100% for electricity and natural gas. In FY 2011, advanced metering was installed on the INL Research Center (IRC) Records Storage Facility (IF-663), the Research Office Building connected to the new Radiological and Environmental Sciences Laboratory (RESL) (IF-601), and EROB (IF-654) (one for the whole building, and one for just the data center). These meters were integrated into the existing Carrier i-Vue building control system for data compilation and trending. These three buildings currently have the highest probability of meeting the energy use requirements of the Guiding Principles.

There are 93 owned facilities at the INL desert site representing a total of 2,600,632 ft² or 47% of the total INL Site footprint that were selected for further evaluation toward the cost effectiveness of advanced metering for electricity. Twenty-five buildings are metered at MFC, three buildings are metered at CFA, and one building is metered at the ATR Complex. The meters at CFA (CF-1611, CF-1612, and CF-1618) and at the ATR Complex (TRA-1626) were installed during FY 2011 as part of the Office of Nuclear Energy (NE) funded Metering Project. Eight buildings at the ATR Complex are metered together as a process and are currently listed as INL's only Excluded Facilities for the energy efficiency goals. These 37 metered facilities represent 40% of the selected appropriate buildings for metering that are actually currently metered.

1.3.2 Planned Actions

The seven facilities that had new meters installed during FY 2011 will be monitored and the data compiled for input into the Environmental Protection Agency (EPA) Portfolio Manager online tool to determine a score for energy use. This score will then be used to validate the buildings energy performance for the Guiding Principles.

As outlined in the INL Metering Plan, there are nine additional meter installation opportunities at IRC to obtain building level metering for the balance of the buildings at IRC. In addition, there are 12 Idaho Falls buildings that would benefit from advanced metering and will be targeted by the City of Idaho Falls advanced meter installation project. These 12 buildings are currently serviced by standard meters and the data is being compiled in the quarterly INL Energy Use Reports.

The City of Idaho Falls is planning to upgrade all of its electrical power meters to smart meter technology. Major INL Idaho Falls facilities will be upgraded as part of the city's initial upgrade project beginning in FY 2012. This upgrade will provide smart meters and a network to supply a central data-collection point to view and analyze the data, and provide demand management capabilities.

In addition to providing a means of trending and validating energy savings, metering also provides proactive space management opportunities. Building energy and water usage information assists with maintenance scheduling, enhanced resource utilization, and accurate space charge-back to building tenants. Advanced metering provides a method to encourage and validate employee behavior change, and provides a dependable tool for facility managers to tune building systems and controls.

Finally, as outlined in the INL Metering Plan, there are 55 additional facilities at the desert site that have been identified for meter installations to meet the goal of 90% of INL electric energy metered by the end of FY 2012. Of these 55 facilities, five are planned to meter in FY 2012 using a small portion of the Sustainability Program's Strategic Investment funding. These five facilities were identified as the best candidates to implement the Guiding Principles that are not targeted by the ESPC Project at CFA and ATR Complex. The next ESPC project has targeted 12 facilities that are the best candidates for implementation of the Guiding Principles. The remaining 38 facilities were evaluated by the Metering Plan spreadsheets provided by the Sustainability Performance Office and were found to not be cost effective to meter; however, they are included in the INL Metering Plan as acceptable alternatives for metering to meet the 90% goal. Additional funding will be needed to provide metering for these facilities, which are currently scheduled for potential installations in FY 2013.

1.4 Cool Roofs

Cool roofs, unless uneconomical, for roof replacements unless project already has CD-2 approval. New roofs must have thermal resistance of at least R-30.

INL initiated implementation of the National Nuclear Security Administration's Roof Asset Management Program (RAMP) in FY 2010. RAMP is a unique, corporate approach to management of roofs across the DOE laboratory complex. By treating roofs at multiple sites as an aggregate portfolio and earmarking a reliable funding stream, this program attracts the technical expertise of "best of class" national roofing consultants and contractors, achieves consistency in condition assessments, and provides economies of scale in roof repairs and replacements. The RAMP program directs resources to the most compelling roofing deficiencies of the complex, documents significant savings, and enhances the value added to the facilities portfolio through optimal repairs. Shared lessons learned have improved performance at all participating sites in safety, scheduling, and overhead reductions. Due to the effectiveness of this partnership between DOE-HQ, the DOE site offices, and the Management and Operating contractors, the program has renewed the contract with a nationally recognized integrating contractor for the remainder of the Facility Infrastructure Revitalization Program (FIRP) program. INL is a partner site with the RAMP program.

In addition to active participation with the RAMP program, INL has the unique status of having installed a cool roof on a National Historic Landmark facility, the Experimental Breeder Reactor (EBR)-1 museum.

1.4.1 Performance Status

In FY 2011, INL replaced 19,933 ft² of roofing on CFA-698 (Standards and Calibration Laboratory) and the MFC-717 (Modular Office Building) with new roofing on the RAMP program that meets the Secretary of Energy's requirements for "cool roofs" and eliminated over \$400K of deferred maintenance. Two additional "cool roofs" were installed on two sections of MFC-774 using the INL's normal roof replacement program.

ICP installed a cool roof over the basement of the TRA-604 modification in FY 2011. The roof area is 18,346 ft².

1.4.2 Planned Actions

INL will continue to use the DOE-NNSA RAMP program to install an additional 20,000 ft² of roofing that meets the DOE "cool roof" requirement and will incorporate "cool roof" requirements into non-RAMP roof replacements as appropriate with the normal INL roof replacement and maintenance program.

In addition to the programmatic planned actions, INL will complete construction and occupy the new Energy Systems Laboratory (ESL) at the Idaho Falls Campus. In FY 2011, INL negotiated the installation of a cool roof on this 91,000 ft² facility at no additional cost. The total square footage of cool roof installed will exceed 25,000 ft².

No ICP planned actions for Cool Roof installations within the remaining duration of the current contract. After the ICP contract is complete, the buildings will be addressed on a case-by-case basis.

1.5 Renewable Energy

7.5% of annual electricity consumption from renewable sources by FY 2013 and thereafter (5% FY 2010–2012).

The INL Site is actively pursuing Renewable Energy Generation capability and is annually purchasing Renewable Energy Credits (RECs) in amounts as outlined in the Energy Policy Act of 2005.

The goal for onsite renewable energy generation and direct purchase of new renewable electricity may not be met due to the low cost of electricity from abundant older hydroelectric and coal sources. The payback for renewable energy projects is unlikely to be successful without supplemental funding to support such projects.

1.5.1 Performance Status

There is one solar transpired wall at the IRC Records Storage Facility. This wall preheats outside fresh air for the office area of this facility. Two other transpired solar walls were installed in FY 2010 as part of the MFC ESPC project. These solar walls provide renewable energy that avoids the use of conventionally generated electricity. Although solar walls avoid other energy use and are a renewable source, they do not contribute to meeting this goal.

INL continued to evaluate the feasibility of installing a 20-MW wind farm on the INL Site and completed the business case analyses at eight sites. The analysis confirmed that a wind farm project on the proposed scale is not currently economically feasible on the INL Site. Part of the evaluation included hosting the first INL sustainability summit with state, industry, and regulatory leaders. Over 50 people attended and presentations were made by DOE-ID, INL, U.S. Fish and Wildlife Services, Idaho Public Utilities Commission, Idaho Falls Power, Idaho Power, Center for Advanced Energy Studies (CAES), INL Research and Development (R&D), and various private industries (wind, solar, biomass). Attendees included INL and DOE-ID staff, Bonneville Power Administration (BPA), utilities, and a representative of the Governor's office. INL continues to evaluate alternative sites for a potential wind farm and collect

suitable data based on private industry recommendations during this summit. However, the original plan and location were abandoned based on INL mission compatibility and costs.

As an interim compliance activity, the INL Site has procured a total of 16,900 MWh of RECs from the Western Area Power Administration (WAPA) at a total cost of \$14,365. This purchase represents 7.5% of the INL Site's electric usage in FY 2010 and is the purchase for FY 2011. The REC purchase for FY 2011 was distributed among all of the INL power users, including the Naval Reactors Facility (NRF), to both help shoulder the cost as well as enable them to claim a 7.5% renewable energy purchase.

1.5.2 Planned Actions

Low energy costs benefit the INL Site, allowing for increased strategic missions and facility enhancements. However, cost benefit analyses generally lead decision makers to place a lower priority on installation of renewable energy projects.

During ESPC contract negotiations, existing lease updates, and new lease negotiations, installation of renewable energy generation is considered and payback evaluated. The proposed ESPC may result in one or two small renewable energy generation projects (wind or solar), but is not identifying any projects that would cumulatively produce the electricity necessary to meet the goal of 7.5% of INL Site electric use. INL R&D continues to investigate the potential installation of numerous renewable energy technologies, but INL will not invest limited funding into renewable projects that are not economically viable or mission compatible.

The INL Site could meet the onsite renewable energy generation goal if funding is secured to support renewable energy installation on the INL Site or if direct purchase of renewable energy becomes available from energy providers. However, if funding is not obtained, the goal will not be met.

The INL Site will continue to meet the minimum requirements of purchasing 7.5% of the electric energy usage in equivalent RECs. However, INL has committed to increase purchase of RECs starting in FY 2012 to 10% of the INL electric usage. Although the increase does not contribute to the GHG reduction goal, it does demonstrate INL's commitment to climate change adaptation and strategic leadership. The calculation method is based on the following: assume 10% of the previous year's purchased electricity total will be purchased as RECs in the current year (i.e., FY 2012 REC purchase is 10% of FY 2011 total purchased electricity). All INL Site contractors will share in this purchase and will be assigned the REC benefits according to their annual electric use.

1.6 Fleet Alternative Fuels

10% annual increase in fleet alternative fuel consumption by FY 2015 relative to an FY 2005 baseline.

The INL Site is developing diversified strategies for increasing alternative fuel consumption and reducing carbon emissions associated with light and heavy-duty vehicles. One of the DOE Order 436.1 transportation fuels goal is to increase the use of alternative fuels by 10% annually, as compared to the FY 2005 usage baseline. There are many opportunities to affect DOE's alternative fuel consumption by implementing fuel switching activities at INL.

1.6.1 Performance Status

In FY 2011 the INL Site used 236,889 gasoline gallon equivalents of alternative fuels. This represents an increase of 210% over the FY 2005 use, and a 39% increase over FY 2010. These usages are a compilation of all INL Site contractors and the total of each of the various alternative fuels as reported into the Fleet Automotive Statistical Tool (FAST) database. These fuel use data indicate that the INL Site is exceeding the alternative fuel use goal and expects to continue this performance through FY 2015.

The INL Site is exceeding the alternative fuel increase goals through actively pursuing Ethanol (E-85) fuel usage and by using biodiesel blends. These increases are facilitated by increasing the availability of E-85 and mandating its use while researching and implementing the use of biodiesel blends in the INL bus fleet throughout the year and across varied climate conditions.

Completed activities include:

- Increased the availability of alternative fuel by converting petroleum tanks to alternative fuel tanks and by encouraging the use of alternative fuel by all users of flex fuel vehicles.
- Updated the existing fueling infrastructure and provided additional alternative fuel locations to allow for improved fuel use tracking and control. Used a new technology, Radio Frequency Identification (RFID) fuel rings, also called "ring technology," making it easier to fuel INL vehicles by automatically capturing mileage and other data that employees once had to enter manually.
- Partnered with a local fuel distributor to make E-85 commercially available to east Idaho.
- Acquired 101 light-duty vehicles in FY 2011, 47 are flex-fuel (46.5%), 46 are hybrid (45.5%), and 8 are gasoline (8%). Of the 101 acquired, 92% are either AFVs or hybrid vehicles.
- Reported to flex fuel vehicle owners (quarterly) their percentage of E-85 usage compared to unleaded usage and encouraged the use of the appropriate flex fuel. This method of encouraging self-governing through information has lead to increases in E-85 fuel use.

Ongoing activities include:

- Selected by General Services Administration (GSA) to receive three American Recovery and Reinvestment Act (ARRA) funded Parallel Hybrid drive shuttle buses to replace three 24-year-old buses. These new buses reduce petroleum use through greater efficiency and use biodiesel. In FY 2011, the new buses were used on lightly loaded commuter routes and for shuttle and tour service.
- Researched methods to use B20 in the bus fleet year around.
- Continued efforts to right size the fleet with more flex-fuel vehicles capable of using E-85.
- DOE-ID and INL began collaborating with the Yellowstone-Teton Clean Energy Coalition (local area Clean Cities program) to encourage and cooperate with local fueling stations and vendors to provide alternative transportation and fueling stations in the area.

The AMWTP currently operates 91 passenger carrying light use vehicles for transportation of personnel and goods to the desert site. The fleet consists of minivans capable of transporting up to six individuals. This small fleet averages 3 M miles a year transporting approximately 600 personnel to and from car-pool locations in local community areas surrounding the INL Site.

Each vehicle in the AMWTP fleet is an AFV, and capable of using unleaded regular or E-85 as a fuel. In FY 2010, the AMWTP partnered with the local fuel distributer to furnish E-85 fuel at a single location in Idaho Falls. Use of this in-town fueling infrastructure continued in FY 2011. Employee commute vanpools based in Idaho Falls were requested by AMWTP management to use the E-85 fuel. These actions resulted in approximately 50% of total fleet using E-85. The AMWTP was able to meet the 10% annual increase in fleet alternative fuel consumption by FY 2015 goal.

1.6.2 Planned Actions

Additional increases in the use of alternative fuels will be obtained through numerous INL Site identified projects and activities that include:

- Replace the INL bus fleet with 50 new motor coaches that run on B20 and have improved fuel mileage by up to 50% (3 mph to 6 mph).
- Continue researching the potential conversion of the INL bus fleet to alternative fuel types.

- Continue to track and trend reliability, fuel usage, and optimize performance of new bio-diesel compatible buses while evaluating future purchases.
- Continue to encourage and establish process to stimulate the use of E-85 in flex-fuel vehicles at the end user level. This includes individual goal setting at an organization level and holding individuals accountable for non E-85 fuel purchases.
- Replace fleet heavy trucks and equipment with new equipment that will run on B20.
- Increase the use of Alternative Fuels by converting the boilers at CFA to run on biodiesel.

1.7 Fleet Petroleum Fuels

2% annual reduction in fleet petroleum consumption by FY 2020 relative to a FY 2005 baseline.

The INL Site is developing diversified strategies for reducing fossil fuel use and carbon emissions associated with light and heavy-duty vehicles. One of the DOE Order 436.1 transportation fuel goals is to reduce petroleum fuels by 2% annually through FY 2020 (30% total reduction), as compared to the FY 2005 usage baseline. There are many opportunities to affect DOE's petroleum fuel usage by implementing fuel reduction and fuel switching activities at INL.

1.7.1 Performance Status

In FY 2011, the INL Site used 862,527 gasoline gallons equivalent, an 8.1% reduction from FY 2005. This usage is a compilation of all INL Site contractors and the total of gasoline and diesel fuels as reported into the FAST database. INL used 623,934 gal of petroleum fuels, a 30% decrease over the FY 2005 and a 23% decrease from FY 2010.

Completed activities include:

- Increased overall bus efficiencies by implementing express routes and eliminating underutilized routes. This was in conjunction with continued efforts in right sizing the fleet with more flex-fuel vehicles and hybrids.
- Incorporated the Park and Ride concept to reduce bus fuel usage, and developed additional Park and Ride lots for employees at outlying locations.
- Used innovative technology to track and reduce fuel usage such as Global Positioning System (GPS),
 Radio Frequency Identification (RFID) fuel rings, and data logger technology to monitor engine performance and driver habits.

Ongoing activities include:

- Continue research methods to use biodiesel blends in the bus fleet year around, reducing the need for 100% diesel.
- Continue the Reduce Idle Campaign that is saving fuel by better managing idling times. Results are positive as this campaign is saving 1,400 gal of fuel per month.
- Continued efforts to right size the fleet with more fuel efficient vehicles.

As the AMWTP has operated its van-pool commuter fleet to meet alternative fuel use goals, it has also contributed to a corresponding reduction in petroleum fuel use.

1.7.2 Planned Actions

Additional reductions in petroleum-based transportation fuels will be obtained through numerous INL Site identified projects and activities that include:

- Replace over 55% of the INL bus fleet with 50 new motor coaches that run on B20 and improve fuel mileage by 50% (3 mpg to 6 mpg).
- Add one additional Park and Ride location to further reduce employee commute and bus fleet fuel usage.
- As the AMWTP comes to a close, the INL Site anticipates a reduction in petroleum usage. Additionally, several pieces of heavy equipment will be consolidated further to reduce vehicle inventory and fuel usage.
- Evaluate technology that will allow INL to operate the bus fleet on "mixed" fuel, which is a combination of compressed natural gas (CNG) and biodiesel. This may allow INL to reduce fuel usage by up to 30%.
- The INL Site commitment to reduce vehicles 35% by FY 2015 will also contribute to this reduction.

1.8 Fleet Vehicle Purchases

75% of light-duty vehicle purchases must consist of alternative fuel vehicles (AFV) by FY 2000 and thereafter.

INL procures light-duty fleet vehicles almost exclusively through the GSA vehicle-leasing program. Maximizing the use of this GSA program is at the forefront of INL plans to achieve this goal. A rotation schedule based on vehicle age and mileage determines when vehicles are returned to GSA. When currently allocated vehicles are due for replacement, the old vehicle is replaced with an AFV or hybrid vehicle from GSA. There are currently very few exceptions for receiving conventional vehicles. Examples include some emergency response vehicles and heavy-duty full-size pickups. However, DOE-HQ has directed that hybrid vehicles (which are not AFV vehicles at this time) be procured when available. This greatly impacts the 75% AFV target.

1.8.1 Performance Status

INL light-duty fleet is comprised of 396 vehicles of which 71% are AFV, 224 are E-85, and 58 are gas/electric hybrids. The INL Site acquired 101 light-duty vehicles in FY 2011, 47 are flex-fuel (46.5%), 46 are hybrid (45.5%), and 8 are gasoline (8%). Of the 101 acquired, 92% are either AFVs or hybrid vehicles.

1.8.2 Planned Actions

The INL Site will continue to monitor and evaluate vehicle utilization. If an AFV can perform adequately relative to a non-AFV, a substitution will be made. INL is also evaluating future technologies to improve the fleet composition. Items that are currently being evaluated include:

- Hybrid capabilities for light-duty full-size vehicles, including ³/₄ and 1-ton pickups
- All electric vehicles for building to building transportation
- Retrofit current fleet with dual-fuel technology.

1.9 Fleet Inventory Sizing

Reduce fleet inventory by 35% within the next 3 years (end of FY 2014) relative to a FY 2005 baseline.

1.9.1 Performance Status

The INL Site met the interim goal of a 15% fleet reduction in FY 2011.

INL performed a complete 2-year utilization study in August of 2010 to begin a Vehicle Allocation Methodology (VAM). Many government agencies are now requiring a VAM including GSA. The purpose of a VAM is to provide Fleet Managers with standard, decision-making criteria and data to determine the optimal vehicle allocation for their fleets. More precisely, it is a tool for establishing and controlling fleet size and composition, more succinctly and popularly termed "right-sizing." From the standpoint of the Office of Management and Budget (OMB), a VAM documents the basis for fleet size and, consequently, fleet-related budgets. In addition, implementation of a VAM can help user-groups to acquire the appropriate number and types of vehicles and equipment according to a clearly defined set of policies and procedures.

INL is making great strides in reducing the size of the fleet while ensuring the capability of meeting INL missions. Since FY 2010, INL has reduced the heavy equipment pool by 38 pieces of equipment. In FY 2011, the following were incorporated into INL fleet operations, reducing fleet numbers without losing support capabilities.

- INL modified three heavy-duty trucks to carry multiple beds. A heavy-duty truck is typically a single-purpose truck (i.e., a dump truck can only be a dump truck). These trucks now use a J-Hook lift and removable beds to accomplish multiple functions. INL maintains a flat rack bed, water truck bed, dump bed, panel truck bed, garbage container bed, and sander bed that can be used on any of these three trucks.
- INL continued working with GSA on replacing the aging and fuel inefficient bus fleet. The current fleet size is 103 buses. Converting to GSA leasing will reduce the total number of buses by 13, maintaining a core bus fleet of approximately 90 buses. This reduction is possible through greater seating capacity of the new buses, each capable of seating 55 passengers (older coaches seat 44 passengers). A newer fleet will require fewer spare coaches due to mechanical unreliability.
- INL is consolidating equipment and prepositioning a small equipment pool at MFC. There is currently one large equipment pool located at CFA. Historically, when a piece of equipment was needed at another location, a duplicate piece of equipment was often purchased. Consolidating the equipment pool and maintaining a satellite area will allow the overall equipment pool to decrease in size and increase equipment utilization.

1.9.2 Planned Actions

The INL Site and DOE-ID have committed to meet the 35% reduction goal by FY 2015.

INL continues to evaluate fleet inventory and is focusing on two key usage areas: light-duty fleet and heavy equipment. AMWTP and ICP continue to evaluate vehicle as cleanup missions are complete or scope reduced.

In FY 2012, the light-duty fleet will be reduced through the following actions:

A Key Valet system will be established at WCB. The goal of this system will be to reduce the number
of permanently assigned vehicles and transition to an as-needed daily rental system. The unmanned
electronic key box will dispatch the keys and collect vehicle information such as miles driven and
duration of dispatch.

- Assigned permanent vehicle reduction effort. Justification for light-duty vehicle permanent assignment will be handled through a rigorous procurement process in combination with the fleet coordinator. A determination of need will be based on established criteria and vehicle availability. In FY 2012, the heavy equipment pool will be reduced through the following actions:
- Eliminate duplicate pieces of heavy equipment with low utilization. Historically, facility and research projects required specific heavy equipment a few times over a long duration. Instead of placing the equipment back into the equipment pool for others to use, the equipment was kept at the same facility location and then used later as needed. As contracts expire, this equipment will be consolidated into a central motor pool to reduce duplicate equipment and increase equipment utilization. Not only does this reduce the size of the equipment pool it also reduces maintenance costs.
- Formation of a fleet equipment users group to reduce the equipment pool without sacrificing critical support. The group will consist of the key users of heavy equipment at all Site facilities and procurement. The goal of this group will be to ensure any reduction made will not have negative consequences to INL.

2. SCOPE 3 GREENHOUSE GASES

2.1 Scope 3 Greenhouse Gas Reduction

13% Scope 3 GHG reduction by FY 2020 from a FY 2008 baseline.

Executive Order 13514 mandates that agencies develop specific GHG reductions. DOE has set a reduction target of 13% for Scope 3 greenhouse gases. The EO sets 2008 as the baseline year against which reductions will be measured.

The INL Site reported Scope 3 GHG emissions for the baseline year, FY 2008, and annually thereafter. Using the Global Reporting Initiative standards, Scope 3 is defined as:

Indirect or shared emissions generated by outsourced activities that benefit the INL Site (occur outside the INL Site's organizational boundaries, but are a consequence of the INL Site's activities). This can include a large number of activities, so the INL Site focused on transmission and distribution losses, employee commuting, employee travel, contracted waste disposal and contracted wastewater treatment since these categories were identified in the Technical Support Document for required reporting. Other activities that could be included in Scope 3 include the embodied emissions of purchased materials.

The INL Site contractors' EMS provides the framework and process for evaluating and monitoring Scopes 1, 2, and 3 GHG emissions and related reduction activities. On an annual basis, appropriate sustainability targets are developed and monitored through the EMS to support the overall reduction in GHG emissions.

As the Environmental Management missions end at various site locations, overall Scope 3 emissions are expected to decrease. Between FY 2011 and FY 2017, employees traveling to and from the Site location may be reduced by as many as 2,000 when subcontractors are included. Removing vehicles directly impacts Scope 1 and Scope 3 emissions.

The challenge is to minimize the impact of operations while increasing the growth of the Laboratory. INL is integrating environmental performance improvement in the areas that matter most to its stakeholders and the Laboratory, including minimizing the environmental footprint, taking a progressive approach to climate change, and championing energy conservation.

2.1.1 Performance Status

Based on data entered into the CEDR for FY 2011, the INL Site has reduced Scope 3 greenhouse gas emissions 23.3%. (FY 2008 - 37,057 mT CO2e and FY 2011 - 28,460 mT CO2e).

INL completed an update to the FY 2008 GHG baseline based on updated guidance. Minimal changes occurred as a result of this update. Additionally, INL completed comprehensive inventories for FY 2009 and FY 2010.

As found in Table 4, each Scope 3 category is listed for FY 2008 and FY 2011 and the calculated emission needed for each by FY 2020.

Table 4. INL Site Scope 3 GHG calculation results for FY 2008 and FY11, and the FY 2020 Goal, by

emissions category.

Scope	Emissions Category	FY 2008 Baseline (MT CO ₂ e)	FY 2011 Actual (MT CO ₂ e)	FY 2020 Reduction Goal (MT CO ₂ e)
3	Electrical Transmission & Distribution Losses (Outside INL's Operational Controls)	6,252.4	5,661.0	5,439.6
	Employee Commuting	20,525.0	14,791.8	17,856.8
	Business Air Travel	8198.7	6200.0	7132.9
	Business Ground Travel: Rental Vehicles	1469.0	923.0	1278.0
	Contracted Mixed Solid Waste Disposal	557.8	870.0	485.2
	Contracted Wastewater Treatment	55.0	14.5	47.7
	Scope 3 TOTAL	37,057.9	28,460.4	32,240.4

Similar to Scopes 1 and 2 GHG emissions described above, one of the most significant factors that influence INL's Scope 3 GHG emissions is the large land area that requires long commutes (approximately 50 miles, one way). Transportation fuel was, in turn, the largest source of GHG emissions within Scope 3. Another source with high emissions was business air travel. Sources with low emissions were contracted waste disposal, contracted wastewater treatment, and business ground travel (rental and personal vehicles).

INL continues to reduce GHGs by transporting employees with a modernized transportation system, taking nearly 2,000 cars per day off the road. By streamlining the INL mass transit system that provides safe, efficient, and sustainable transportation to work for INL employees throughout the eastern Idaho region, INL encourages travel behavior changes to reduce carbon emissions and fossil fuel consumption, increased highway safety, and in doing so, INL models future trends in mass transit to local governments across the region. Other actions include instituting a park and ride system, relocating employees to town offices, use of E-85 and biodiesel fuels, and use of modern buses, vans, and light-duty vehicles to reduce carbon emissions.

2.1.2 Planned Actions

The INL Site will continue to implement projects that reduce employee commute, employee travel, waste disposal, and minimize electric usage to reduce Transmission and Distribution losses. Corresponding Scope 3 emission reductions will occur. Knowing the target emission for each GHG category as found in the INL GHG Reduction Strategy, helps prioritize and plan projects accordingly.

Employee Commute Reduction tactics include:

- Change commute by increasing carpools, change personal car use to INL buses
 - Parking management through parking pricing (e.g., begin charging, give discount for rideshare parking); preferential parking (e.g., designated carpool and vanpool spaces); parking supply reduction.
- Move employee work locations from Site to town when reasonable.
- Increase INL Bus ridership for Site employees by 5%.

- Increase telecommuting.
- Telework centers.
- Facility enhancements.
 - Secure bike storage or bike racks, shower facilities, and lockers.
- Use alternative fueled vehicles on business travel.
- Promote use of emission free transportation source such as walking and biking.
- Subsidies:
 - Vanpool subsidies on a limited or continual basis.
 - Empty seat subsidy—to limit the amount start-up riders have to pay until new riders join.
 - Bike maintenance subsidy.

Employee Travel Reduction strategies:

- Use video and web conferencing to hold virtual meetings and avoid travel when possible.
- Increase rentals of hybrid and alternative fueled vehicles over traditional options on business travel.
- Reduce air travel, particularly short range (<300 miles) air travel, except where necessary for mission accomplishment.
- Reduce car rentals by promoting carpooling at conferences and other meetings on business travel.
- Research establishing a government rate for plug-in hybrid electric vehicle (PHEV) and hybrid electric vehicle (HEV) rentals while on business travel.
- Encourage the use of public or group transportation modes at destination cities.

3. HIGH PERFORMANCE SUSTAINABLE BUILDINGS (HPSB) 3.1 HPSB Existing Buildings

15% of existing buildings greater than 5,000 gross square feet (gsf) to be compliant with the five Guiding Principles (GPs) of High Performance Sustainable Buildings (HPSB) by FY 2015.

There are 27 Guiding Principles in five categories. To achieve compliance with the Guiding Principles, all 27 must be met.

As indicated in the Facilities Information Management System (FIMS) database, the INL Site has 170 buildings that are appropriate to consider for audits and upgrades to implement the Guiding Principles. Fifteen percent of these buildings calculates to a minimum of 26 buildings that must meet the Guiding Principles by FY 2015. The Existing Buildings worksheet of the CEDR contains 23 buildings identified as having the highest probability of meeting the Guiding Principles. These buildings are either currently metered or have been targeted for metering in FY 2012. Of these 23 buildings, one is LEEDTM Certified, one is LEEDTM Gold certified, and one is pending LEEDTM Gold certification. The remaining 20 buildings will be targeted for the Guiding Principles compliance path.

3.1.1 Performance Status

The Technical Support Building (TRA-1608) was LEEDTM certified in November 2010. The LEEDTM design package was also submitted for the new Radiological Environmental Sciences laboratory (IF-683) during FY 2011.

Metering was installed on seven facilities (three in town, three at CFA, and one at ATR Complex) so that electrical data can be compiled for entry into Portfolio Manager. Energy and water reduction projects were developed in FY 2011 for IF-601, IF-602, IF-616, and IF-654 to further enhance implementation of the Guiding Principles in these facilities.

INL documented compliance with eight of the 27 Guiding Principles.

The INL Site performed assessments on over 90% of the buildings eligible for Guiding Principle certification, resulting in the DOE HPSB scorecard going from red to green in two of the four measured categories for NE.

3.1.2 Planned Actions

INL Site facilities planned to meet the Guiding Principles do not include buildings owned by EM. Since the EM mission at the INL Site is to reduce footprint and complete the cleanup, the existing building life is either to short or to uncertain to invest in upgrades. This presents a challenge because the INL Site as a whole must meet the 15% goal (26 buildings) as noted above. While only 23 buildings are listed in the CEDR, INL has further evaluated facilities and identified 27 INL facilities (1 more than the required 26) that have the highest probability of fully implementing the Guiding Principles. However, this is 11 above the original INL target of 16 facilities (15% of the INL total) and is unlikely to occur by FY 2015 without additional project funding. All 27 facilities are listed in Table 5. This table includes information on metering and the year each building is expected to meet the Guiding Principles based on preliminary engineering evaluations. However, each of the additional 11 facilities INL now has responsibility for will be fully evaluated in FY 2012 to determine if the Guiding Principles can be fully implemented by FY 2015. This table will be used as the work plan for prioritizing and manage the certification process for these identified buildings.

INL will install up to nine energy and water reduction projects in WCB, EROB, and ROB. These projects were developed during FY 2011 for implementation with INL Strategic Investment funding in FY 2012. These following projects are expected to help these buildings achieve an acceptable Energy Star Building score of 75 or higher for input into Portfolio Manager:

- 1. WCB Chiller Replacements
- 2. EROB CO₂ Controls
- 3. WCB Water Fixture Replacements
- 4. IRC (IF-602) Water Fixture Replacements
- 5. WCB Lighting Fixtures
- 6. WCB Lighting Controls
- 7. WCB Exterior Lighting Fixtures
- 8. ROB (IF-601) Exterior Lighting Fixtures
- 9. IRC (IF-603) Motor/Controls.

In FY 2012, INL will continue to develop additional projects for FY 2013 funding that will upgrade the selected facilities in Table 5 to meet the Guiding Principles by the planned date. In addition, CF-1611, CF-1612, CF-1618, and TRA-628 will be targeted by ESPC Project 3 for Energy Conservation Measures that will help these four facilities meet the Guiding Principles.

The remaining 17 procedure oriented Guiding Principles will be documented and both IF-663 and IF-654 are planned for Guiding Principle compliance.

Table 5. Buildings planned to meet Guiding Principles.

Building	Metered	iVue	Water Metered	GP Compliant	Comments
REL	2014	2014	2014	2015	LEED TM Gold in FY 2015
ESL	2012	2012	2012	2013	LEED TM Gold in FY 2013
MFC TSB	2013	2013	2013	2014	LEED TM Gold in FY 2014
IMCL	2012	2012	2012	2012	LEED TM Gold in FY 2012
IF-665 (CAES)	Yes	No	Yes	Yes	LEED [™] Gold
IF-683 (RESL)	2012	2012	No	2012	LEED TM Gold in FY 2012
TRA-1608 (TSB)	No	No	No	Yes	LEED TM Certified
TRA-1626 (TTAF)	Yes	Yes	No	2013	LEED TM Certified Except for Energy Use
IF-601	Yes	Yes	No	2013	
IF-602	Yes	2012	No	2014	
IF-616	Yes	2012	Yes	2014	
IF-654	Yes	Yes	Yes	2012	GP Compliant in FY 2012
IF-663	Yes	Yes	No	2012	GP Compliant in FY 2012
IF-680	Yes	2012	2013	2014	Water Meter by City of Idaho Falls
IF-684	Yes	2012	2013	2014	Water Meter by City of Idaho Falls
CF-1611	Yes	Yes	No	2013	
CF-1612	Yes	Yes	No	2013	
CF-1618	Yes	Yes	No	2013	

Table 5. (continued).

Building	Metered	iVue	Water Metered	GP Compliant	Comments
CF-609	2012	2012	No	2015	
CF-621	2012	2012	No	2015	
CF-623	2012	2012	No	2015	
CF-696	2012	2012	No	2015	
CF-698	2012	2012	No	2015	
MFC-710	Yes	2012	No	2014	Need to Access ESPC Installed Meter
MFC-725	Yes	2012	No	2014	Need to Access ESPC Installed Meter
MFC-782	Yes	2012	No	2014	Need to Access ESPC Installed Meter
TRA-628	2012	2012	No	2014	

3.2 HPSB New Construction

All new construction, major renovations, and alterations of buildings greater than 5,000 GSF must comply with the GPs and, where the work exceeds \$5M, each are $LEED^{TM}$ - NC Gold certification or equivalent.

The INL Site is implementing High Performance Sustainable practices and design specifications in new building design and construction by introducing High Performance Sustainable design criteria at conceptual design and following though during design and construction by using LEEDTM construction concepts and the Guiding Principles for High Performance Sustainable Buildings.

The INL Site also constructs buildings that are very mission specific and are not readily compatible with LEEDTM or with the Guiding Principles. One new such facility is described as follows:

"INTEC's new Integrated Waste Treatment Unit (IWTU) is currently anticipated to have construction completed in FY 2012. This will be a large energy intensive facility with an estimated 3-year life. Due to the mission of this facility and its energy use characteristics, it is being planned for exclusion using Part G of the Excluded Buildings Self Certification. The internal process at this facility will consume most of the metered energy."

The IWTU was also at CD-2 before the LEEDTM Gold requirement was implemented.

INL new construction includes DOE-owned and privately leased facilities. All existing leased facilities are privately owned. INL has no GSA leased facilities.

3.2.1 Performance Status

The ATR Complex Technical Support Building (TSB) received LEEDTM – NC Certification status in November 2010 from the U.S. Green Building Council.

Construction of the new RESL was completed in FY 2011 and LEEDTM –NC Gold certification is expected in FY 2012.

Construction was started on the new ESL, planed for DOE-ID lease, is expected to be finished by the end of FY 2012. LEEDTM – NC Gold certification is planned for this facility and is expected to be certified in FY 2013.

3.2.2 Planned Actions

In addition to the ESL described above, three other new buildings that are currently planned for $\mathsf{LEED}^\mathsf{TM}$ Gold certification.

- 1. Research and Education Facility 148,000 ft² Complete in FY 2013 (leased)
- 2. Irradiated Materials Characterization Lab 12,000 ft² Complete in FY 2013 (owned)
- 3. MFC Technical Support Building 17,000 ft² Complete in FY 2014 (owned).

Neither ICP nor AMWTP are projecting any new building starts within the remaining duration of their current contracts.

4. WATER USE GOALS

4.1 Water Use Reductions

26% water intensity reduction by FY 2020 from a FY 2007 baseline

The INL Site's goal for water usage is a 16% reduction of usage intensity by FY 2015, or 2% each year, as compared to the FY 2007 Water Usage Intensity Baseline measured in gal/ft².

Due to the nature of the various INL Site missions, many of the operations can be cyclical and result in varying usages of water throughout the year and from year to year. In addition, as facilities are removed and processes are shut down, the lower square footage can actually result in an increase in water use intensity even as overall water usage is reduced.

The water intensity reduction goal will be very difficult for the INL Site to accomplish. Long payback calculations based on inexpensive water and electric rates make water saving projects unattractive. Completion of the identified ESPC projects is anticipated to contribute approximately 7.5% towards the 16% goal. However, water usage is so dependent upon process usage and unplanned events such as the FY 2010 wildfires and ARRA-funded additional D&D work, that the remaining 8.5% may be very difficult to obtain.

4.1.1 Performance Status

As per the water reduction goals found in DOE 436.1, the INL Site should be at an 8% water intensity reduction at the end of FY 2011 when compared to the FY 2007 Reportable Water Usage Baseline. The INL Site used a total of 898.7 M gal of water in FY 2011, resulting in a water usage intensity of 166.8 gal/ft², a decrease of 4% over the FY 2007 baseline (173.9 gal/ft²). However, as demonstrated through water use and building square footage data entered into the CEDR, the INL Site total water used has decreased from 1,050.9 M gal in FY 2007 to 898.7 M gal in FY 2010, for a total water used reduction of 14.5%. The INL Site 6,043,042 ft² to 5,384,917 ft², a reduction of 11% since FY 2007.

INL installed one meter at the INL Administration Building (IF-606) at a total cost of \$2K. The City of Idaho Falls now charges INL an actual usage rather than a monthly flat fee. The payback was less than 6 months for this project. Additional projects of this type are possible and support meeting the reduction goal.

INL partnered with industrial water system experts from the Pacific Northwest National Laboratory (PNNL) to evaluate the water systems primarily at the ATR Complex. This evaluation identified several areas of significant water use that may be addressed through system modifications. The final report is due back to INL in mid-FY 2012. This report will be used for project development for FY 2013 Strategic Investment projects.

INL installed xeriscaping at one of the University Boulevard buildings in Idaho Falls.

INL completed implementation of the MFC ESPC project during FY 2011, which has eliminated the leaking condensate lines. Water reporting from FY 2011 indicates that water usage at MFC is down 2.3 M gal as compared to FY 2010.

ICP completed the INTEC water supply system pump downsizing replacement project in FY 2010. This project has shown significant water savings for ICP during FY 2011. ICP also completed the deactivation, decommissioning, and demolition of the INTEC Analytical Laboratory facilities during FY 2011, which resulted in an additional 50 M gal of annual water savings.

4.1.2 Planned Actions

Other projects that will continue to contribute to water use reductions for the INL Site include several ongoing tasks:

- Leak analyses will continue at all areas of the Site.
- Strategic Investment projects for FY 2012 will replace antiquated plumbing fixtures at the WCB and IRC Office Building.
- INL will continue purchasing Environmental Protection Agency WaterSense or other water efficient products, which will be documented by Sustainable Procurement processes.
- The ESPC project planned for the ATR Complex, SMC, and CFA will eliminate once-through HVAC cooling water, increase efficiency through fixture replacements, locate and repair leaking water lines, and possibly reduce industrial water use at the ATR Complex.
- The new ESL and Research and Education Laboratory (REL) facilities in Idaho Falls are scheduled to be occupied in 2012 and 2014, respectively. These LEEDTM Gold facilities will be lower water users, incorporate xeriscaping concepts, and add over 239,000 ft² of space in the water intensity calculation.
- EM missions, as noted in the CEDR, will contribute to water reductions as facility missions are complete. These include the AMWTP complex of facilities being cold, dark, and dry, ceasing operation of the INTEC Liquid Waste Management System, and New Waste Calcine Facility shutdown.

Based on the previous cost of the MFC ESPC that resulted in a 5% water reduction and the proposed ESPC at the ATR Complex and CFA, additional water reduction implementation at the INL Site could cost between \$40M and \$50M. Projects include:

- Replace all high water use faucets, toilets, showerheads, and urinals across the INL Site.
- Upgrade ATR cooling tower.
- Detect and repair underground leaks.
- Repipe chiller water disposal paths.
- Reduce ATR Complex sewage lagoon size.
- Replace all inefficient domestic hot water heaters across the INL Site.

4.2 ILA Water Use Reductions

20% water consumption reduction of industrial, landscaping, and agricultural (ILA) water by FY 2020 from a FY 2010 baseline.

ILA water is not applicable to the INL Site. All water obtained by the INL Site is obtained from the Snake River Plain Aquifer and is potable. The INL Site does not have access to any non-potable water supplies.

4.2.1 Performance Status

N/A.

4.2.2 Planned Actions

N/A.

5. WASTE MINIMIZATION

5.1 Landfill Waste Diversion

Divert at least 50% of non-hazardous solid waste, excluding construction and demolition debris, by FY 2015.

The INL Site Pollution Prevention Plan, DOE/ID-10333, describes the pollution prevention practices pursued at the INL Site. INL expanded the co-mingled recycling and paper shredding programs to the desert site facilities (CFA, MFC, and ATR Complex) during late FY 2010 and continued through FY 2011. INL is also working with INL Site contractors to expand co-mingled recycling at other site facilities. All INL employees are capable of participating in the co-mingled recycling program that allows employees to place a variety of recyclable materials into one collection bin. ICP also has co-mingled recycling at town facilities and paper recycling at the desert site facilities. With the exception of SMC, all town and desert site employees have the option to participate in the paper shredding recycling program, which includes regular office paper and controlled unclassified information (CUI) materials for shredding. In FY 2011, INL facilities recycled 216,831 lb of co-mingled materials and 441,760 lb of office paper and cardboard. With the participation of the Site facilities, the recycled numbers increased approximately 84% for co-mingled materials and 50% for paper. This accounts for approximately 24% diversion of municipal solid wastes collected at INL facilities.

The INL Site continues to utilize a number of processes to reduce the quantity and toxicity of hazardous chemicals. The processes follow the simple reduce, reuse, and recycle steps to help achieve the overall goal. The INL Site utilizes chemical coordinators and environmental personnel to help ensure the requested materials are actually needed, are not available through an exchange/sharing program, and the smallest/most appropriate quantity is being ordered. INL also stipulates the use of Massachusetts Institute of Technology (MIT) Green Chemical alternatives list at

(http://web.mit.edu/environment/academic/alternatives.html) to help chemical coordinators identify "greener" alternatives to chemicals being requested. INL currently shares chemicals at IRC and town facilities (and at the Site when possible); all chemicals are targeted as an overall reduction. Chemical coordinators actively search for existing inventory to preclude new purchases. For FY 2011, approximately16 chemical transfers occurred for usage by another organization or contractor. INL is participating with other national laboratories to establish a chemical reduction guidance that will outline more specific steps and reduction goals for INL. The next steps are to keep working towards minimizing what is coming in through Procurement and increasing sharing of existing inventories because there is limited money available for disposal. INL is actively and continually working towards improvement in reduction of inventories through the avenues of acquisition, use, and disposal.

The AMWTP Hazardous Waste Management Act (HWMA)/Resource Conservation and Recovery Act (RCRA) Permit requires that the AMWTP conduct and complete a source reduction evaluation review and written plan, in accordance with the procedures and format provided in the "EPA Waste Minimization Opportunity Assessment Manual" (EPA/625/7-88/003). This review and plan was submitted to the director by March 31, 2011 and every 4 years thereafter, and must include detailed descriptions of any programs the AMWTP may have to assist generators of hazardous and mixed waste in reducing the volume (quantity) and toxicity of wastes produced.

AMWTP reduces and minimizes the quantity and toxicity of hazardous chemicals and materials through a procurement process that stresses environmentally preferable purchases. One of the objectives stated in the AMWTP management procedure for the acquisition of material and services is to use recycled-content and bio-based content materials and other environmentally preferable products and services to the maximum practicable extent. Purchase requisitions are screened by an assigned procurement specialist for environmentally preferable materials.

5.1.1 Performance Status

The INL Site diverted 15.3% (416.43 Metric Tons [MT]) of its non-hazardous solid waste in FY 2011. INL diverted 25.2% (373.1 MT) of municipal solid waste from the landfill in FY 2011. ICP diverted 3.5% (43.33 MT) of municipal solid waste from the landfill in FY 2011.

INL implemented two pilot projects in FY 2011 to help identify additional waste streams for diversion assessment: cafeteria waste/composting and battery recycling. Both pilot programs were initiated and carried out for several months each; however, neither appears to be economically viable. Further evaluation will be needed (funding dependent).

In FY 2011, INL held a campaign to reduce the use of paper by setting all copiers and printers to default duplex printing/copying. An average of 12 reams of paper per person has been used annually since 2007. A survey was conducted midway through the campaign, which determined that approximately 21% of copiers and printers capable of duplexing were set to default duplex. The campaign encouraged users to save paper by setting their printers to duplex default and instructed them how to do it. Even so, many employees found that it was too difficult to change the default settings. In addition, the maintenance contract for the copiers was modified to include resetting all copiers to duplex default during FY 2012.

5.1.2 Planned Actions

The INL Site will continue to educate and encourage employees to participate in the recycling and paper shredding programs in town and at the industrial campuses. New for FY 2012 is an interactive drag and drop recycling quiz that was incorporated into the all employee ES&H refresher training and placed on the Recycling Program's internal website.

The INL Site will continue to evaluate potential outlets and the expansion of recyclable waste streams, such as cafeteria grease, fluorescent light tubes, batteries, and food wastes, to further increase the amount of wastes diverted from the landfill.

The INL Site will continue to reduce printing paper used through a campaign for users to set printers and copiers to duplex printing. Centrally managed printing will be evaluated.

The INL Site anticipates meeting this goal if funding is allocated to optimize the current waste diversion systems, modify contracts, and markets are available to divert waste streams.

5.2 Construction and Demolition Waste Diversion

Divert at least 50% of construction and demolition materials and debris, by FY 2015.

INL has incremental goals for construction and demolition waste, increasing 10% per year from 2011 through 2015. INL exceeded the FY 2011 goal of 10% diversion.

The diversion of construction and demolition debris during D&D activities for ICP is often problematic due to the potential for radioactive contamination. Diversion of D&D waste is often quite costly and the wastes are usually disposed of onsite.

5.2.1 Performance Status

The INL Site diverted 12% of its construction and demolition (C&D) in FY 2011 (1,705.73 MT).

The majority of AMWTP and ICP C&D waste is prohibited from offsite reuse due to the DOE moratorium. Construction waste and landfill acceptance data is analyzed quarterly to track performance against the goals. INL diverted 39.4% (3,233,350 lbs) of construction and demolition (C&D) waste during FY 2011. This included C&D soil reused as landfill cover and asphalt regeneration. The tracking system for waste material sent to the landfill was enhanced to better categorize conditional waste into the following subcategories: concrete, metal, soils, and furniture. This will allow INL to analyze this waste stream and determine if segregation is viable.

5.2.2 Planned Actions

INL intends to perform the following actions to enhance the C&D waste diversion process:

- Incorporate metals recycling into one pilot D&D task when allowed under the current recycling moratorium
- Analyze the conditional waste stream to better develop segregation and reuse strategies
- Develop a process to accurately measure the wood waste diverted to the wood chipper
- Engage construction subcontractors to solicit best practice ideas relative to the INL logistics and market potential.

ICP will evaluate D&D and other waste streams for recycle and reuse dependent upon reasonableness of costs compared to onsite disposal as well as the metals moratorium and potential for radioactive or chemical contamination.

6. SUSTAINABLE ACQUISITION

6.1 Sustainable Acquisition

Procurements meet sustainability requirements by including necessary sustainable provisions and acquisition clauses (95% each year).

DOE's SSPP commits to the following sustainable acquisition goals:

- Ensuring 95% of new contract actions, including task and delivery orders under new contracts and existing contracts, require the supply or use of products and services that are energy efficient (ENERGY STAR or FEMP-designated), water efficient (WaterSense), biobased, environmentally preferable (including EPEAT-registered products), non-ozone depleting, contain recycled content, or are non-toxic or less toxic alternatives.
- Updating departmental sustainable acquisition plans (previously known as green purchasing plans or
 environmentally preferable purchasing plans), policies, and programs to ensure that all federally
 mandated designated products and services are included in all relevant acquisitions.

6.1.1 Performance Status

The INL Site did not meet the 95% sustainable provisions goal. ICP is not contractually obligated and only tracks FEC materials. INL put a system in place in FY 2011 and preliminary data runs indicate 31% of the contracts in FY 2011 contained applicable clauses. This does not meet the goal, but changes to contract acquisition systems are timely and costly with little benefit to contracts that are service based. However, INL made great progress and is incorporating the Sustainable Acquisition requirements through effective implementation of procedures, policies, and enhanced work processes that increase the visibility, availability, and use of sustainable products.

- INL enlisted the help of a Sustainable Acquisition offsite expert to provide training to over 125 INL employees who use, procure, or have contract oversight of sustainable acquisitions products. Training helped focus key user groups on which items to request, why INL needs to procure these products, and how to request. Additionally, HS-22 provided an HQ perspective on sustainable acquisitions.
- INL awarded a long-term contract for janitorial products with the latest sustainable acquisition language. Vendor requirements were also included to provide detailed reports of purchased products that are defined as preferred with dollars indicating the amounts that were or were not considered to be preferred.
- In addition to defining a way to track contract acquisitions against the 95% goal, INL flagged hundreds of potential commodity codes related to sustainable acquisition products, thereby greatly reducing the number of purchases requiring further review in an effort to enhance automated tracking and reporting within the current system.
- Preference program: INL's automatic document generation system ensures applicable contracts include language that favors the acquisition of recovered content products. For example, INL requires its supplier of standard desktop computers to provide items designated as Electronic Product Environmental Assessment Tool (EPEAT) Silver or better.
- Estimation, Certification, and Verification: INL requires suppliers (e.g., construction services, office
 products, paper products) to deliver spend reports listing the designated versus preferred purchases. In
 addition, INL has developed standard reports that provide the summary data necessary for reporting
 spend for recycled content products.
- Annual Review and Monitoring: INL conducts an annual review and assessment of a specific aspect of the sustainable acquisition program.

• Sustainable acquisition requirements prior to FY 2011 were incorporated in DOE-ID major site contracts.

The ICP material acquisition process directs procurement to use recycled-content and bio-based content materials and other environmentally preferable products and services to the maximum extent practicable.

6.1.2 Planned Actions

In recent years, there continued to be many changes and additions in sustainable acquisition requirements. INL plans to perform the following actions to improve its sustainable acquisition program:

- Incorporate sustainable acquisition language into janitorial and construction contracts
- Develop appropriate mechanisms to augment the existing reporting requirements and track compliance with this goal
- Enhance the current ordering system to increase sustainable acquisition visibility to the laboratory community
- Ensure personnel resources are adequate and aligned in accordance with the proper organizational roles and responsibilities
- Conduct a campaign to increase the education and awareness of sustainable acquisitions and their effect on certain INL performance requirements
- Benchmark processes with other laboratories to leverage lessons learned and to discover potential improvements to INL's process.

7. DATA CENTERS AND ELECTRONICS STEWARDSHIP

7.1 Data Center Metering

All data centers are metered to measure a monthly Power Utilization Effectiveness (PUE) (100% by FY 2015).

The INL Site has two data centers. The first is INL's Information Operations and Research Center (IORC), which is the primary location for the business enterprise servers and data repository. This data center hosts business systems, e-mail, project applications, and the primary infrastructure systems for INL. The second data center is in EROB and is the location for the High Performance Computing (HPC) servers and storage.

7.1.1 Performance Status

The HPC data center in EROB was metered when it was constructed in FY 2007. In FY 2011, these meters were connected to INL's i-Vue building control system.

7.1.2 Planned Actions

The IORC facility has two City of Idaho Falls electric meters, but the data center is not separately metered from the rest of the office space. INL intends to implement metering for just the data center so that a correct PUE can be measured and calculated.

7.2 Data Centers PUE Measurement

Maximum annual weighted average Power Utilization Effectiveness (PUE) of 1.4 by FY 2015.

7.2.1 Performance Status

In FY 2007, INL completed construction of the 3,700 ft² data center in EROB to support HPC resources and also ensured it would support the strategy and necessity to expand to 10,000 ft² in the future. Several practices were incorporated to assist with energy efficiency goals for the laboratory.

- The data center space was right-sized to minimize the associated operating energy costs.
- Cooling for the data center uses a green solution called "free cooling" when appropriate. As long as the outside temperature ranges between 40°F and -31°F, and the temperature of the water leaving the data center is not too high, the chillers do not operate. Using a "flat plate" to extract the heat from the data center water and transfer that heat to the cooling towers without chillers saves a considerable amount of energy.
- INL's large computer clusters include water-cooled doors to improve the overall cooling efficiency of the data center. The exhausted warm air from the compute nodes is immediately cooled as it passes through the rear cooling doors on the racks and reenters the room at temperatures near those of the open air in the data center. The computer room air condition (CRAC) units are cooled by the chilled water and are required to do less work, which reduces electricity consumption.
- Finally, the last HPC cluster procured was designed using the latest technologies in high-density processors from Advanced Micro Devices, Inc. Having four 8-core processors in each node (versus traditional configurations) greatly reduced the requirements for space, power, and cooling of the entire system. The configuration includes fewer racks, fewer nodes, less network infrastructure, and fewer power supplies, all resulting in less consumed power.

As a result of these efforts, the HPC data center has a calculated PUE ranging from 1.3 to 1.4, depending on system load and outside weather conditions (see Table 6).

Table 6. INL HPC data Center PUE.

Instantaneous Power (May 19, 2011)	Consumption (KW)	3-Year Power (February 2008– May 2011)	Consumption (KW)
Compute	420	Compute	7018
Cooling	140	Cooling	2750
PUE	1.3	PUE	1.4

In addition, to achieve greater operational efficiency, Information Management (IM) has embraced numerous emerging technologies within the two data centers by the following industry standard practices:

- Virtualizing and consolidating the server. Currently, more than half of INL servers are running in a virtual environment.
- Investing in new high-efficient server and uninterruptable power supply (UPS) hardware and replacing the legacy systems.
- Implementing facility best practices to reduce energy use.
 - Redesigning Data Centers and establishing hot and cold aisles to decrease air conditioner usage.
 - Removing old cabling under the floor to improve air flow.
- Investigating using newer network equipment that will utilize higher bandwidth with less equipment and port needs (Cisco Nexus).
- Purchasing Energy Star rated equipment where applicable.

The IORC data center PUE calculates at greater than 3.0, but this calculation includes the entire building, not just the data center.

7.2.2 Planned Actions

Virtual Machine (VM) Server Farms – INL IM will promote the use of virtual servers (one physical server computer which may use several virtual instances of server computers) wherever possible in place of single purpose servers.

VM Desktops – IM will promote the use of virtual desktops on one physical desktop computer for users who need to use several different operating systems.

Desktop Refresh Initiative (DRI) – When the end of the year overall INL budget allows, IM will also facilitate the desktop refresher initiative that purchases newer, more efficient computers to replace older wasteful desktop computers and laptops.

As part of ongoing activities, IM will continue to upgrade and consolidate servers. Additional planned activities include popular data center practices such as increasing the data center room temperature by approximately 10°F. This by itself should provide further savings without additional risk. The data center control system is a "Carrier" system with a large number of monitoring and control points. This system will be further enhanced to provide better day-to-day monitoring, trending, and reporting. Other options are being considered at such as powering down unused computer nodes to save additional power.

Lastly, the data center in IORC will be separately metered and the correct PUE calculated.

7.3 Electronic Stewardship

Electronic Stewardship – 100% of eligible PCs, laptops, and monitors with power management actively implemented and in use by FY 2012.

7.3.1 Performance Status

The INL Site has been a partner in the Federal Electronics Challenge (FEC) since FY 2007. INL's participation in the FEC is supported by representatives from procurement, information management, property management, and environmental support services. Through continuous improvement, INL has emerged as a leader in electronics stewardship as evidenced by winning the FEC Bronze award in FY 2007 and FY 2008, the FEC Silver award in FY 2009 and FY 2010, and the FEC Bronze in FY 2011. More specifically:

- Power management settings are installed on all eligible computers, a process started several years ago. In FY 2011, INL updated these settings to ENERGY STAR values. Information Management uses a centrally managed configuration tool (LANDesk) to set and maintain the power management settings on all Information Technology (IT)-managed and jointly managed computers. Administrators of self-managed computers (computers that are not manageable with LANDesk) are given instruction on how to set the power management settings on their computers. Exemptions from these power management settings are tracked in IM's Remedy database and are approved after valid business justifications for exemptions are provided.
- In FY 2011, INL held a campaign to reduce the use of paper by setting all copiers and printers to default duplex printing/copying. An average of 12 reams of paper per person has been used annually since FY 2007. A survey was conducted midway through the campaign, which determined that approximately 21% of copiers and printers capable of duplexing were set to default duplex. The campaign encouraged users to save paper by setting their printers to duplex default and instructed them how to do it. Even so, many employees found that it was too difficult to change the default settings. In addition, the maintenance contract for the copiers was modified to include resetting all copiers to duplex default during FY 2012.
- INL promotes the standard for new electronic equipment and hardware to be a minimum of Energy Star 5.0 Category B rating and wherever possible Category A Energy Rating. Dell Energy Smart is enabled from the manufacturer. Dell ESMART settings are used wherever possible.
- Up to 88% efficient power supplies are used on standard desktop computers.
- In FY 2011, 94% of INL's purchased computers, liquid crystal displays (LCDs), and laptops were EPEAT registered. The INL standard for procurement of desktop computers, workstations, and laptops is to meet or exceed EPEAT Silver and wherever possible EPEAT GOLD standards.
- INL property services reuses computers and other electronics through disposal via reutilization, donations, transfers, and sales. These methods meet the GSA definition for recycling electronic property, resulting in over 99% reuse during FY 2011.

ICP has also been a partner in the FEC and was awarded the FEC Bronze award in FY 2011. Power management settings are available on personal computer systems. Implementation of power management has not been implemented due to IT operations requirements.

It is AMWTP's policy to procure only ENERGY STAR-compliant computer monitors with ENERGY STAR Power Management features enabled as part of the standard load. The AMWTP IT Infrastructure Group has an established policy stating that all eligible computers and monitors must have Energy Star features that allow AMWTP to comply with the DOE's mission while ensuring effective energy conservation. The Group has implemented configurations and mechanisms on eligible systems to automatically execute energy conservation measures. Certain production and plant operations systems

were excluded from this policy, for example control room systems and camera monitors, as those systems are safety and operations related and must remain in the "on" position. AMWTP employees are prevented from making changes to these settings by cyber security policies that are in place on all AMWTP systems.

7.3.2 Planned Actions

INL will continue to focus efforts that are cost effective and least disruptive to performers. Specifically:

- Incorporate power management on printers, including duplex printing as well as update LWP-1316, "Power Management for Personal Computers," and communicate the changes and expectations via iNotes, Lunch and Learns, etc. (EMS FY 2012 target).
- Build upon the network printing initiative and the potential managed service for printing to evaluate centrally managed printing (EMS FY 2012 target).
- Require all new networked printers to support duplex printing as part of INL's printer standards (EMS FY 2012 target).
- Communicate, participate, and encourage personnel to recycle/reuse computer and cellular/wireless equipment, and recycle with vendors as appropriate (EMS FY 2012 target).
- Continue to ensure that 95% of all desktop, laptop, and monitor purchases are EPEAT/ENERGYSTAR compliant; extend the standards to printing and imaging equipment (EMS FY 2012 target).
- Further establish and implement policy and guidance to ensure the use of Power Management and other energy efficient or environmentally preferred options and features on all eligible electronic products.
- ICP will continue to work with IT to evaluate options for implementing power management while maintaining system availability requirements.

8. REGIONAL AND LOCAL PLANNING

Executive Order 13514 instructs federal agencies to meet the following regional and local planning goals:

- Participate in regional transportation planning and recognize existing community transportation infrastructure
- Align federal policies to increase the effectiveness of local planning for energy choices such as locally generated renewable energy
- Ensure that planning for new federal facilities or new leases includes consideration of sites that are pedestrian friendly, near existing employment centers, accessible to public transit, and emphasize existing central cities and, in rural communities, existing or planned town centers
- Identify and analyze impacts of energy use and alternative energy sources in all Environmental Impact Statements and Environmental Assessments for proposals for new or expanded federal facilities under the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.)
- Coordinate with regional programs for federal, state, tribal, and local ecosystem, watershed, and environmental management.

8.1.1 Performance Status

As the INL Site primary contractor responsible for land management and sitewide leadership, INL maintains excellent relationships with local community planning and government groups, including the cities of Idaho Falls, Blackfoot, Arco, and Pocatello, as well as the counties of Bonneville, Butte, Bingham, and Bannock. Interactions include transportation infrastructure, facility planning locations, traffic patterns, and future infrastructure needs. When warranted, the community is involved and encouraged to supply feedback to decision makers during any National Environmental Policy Act public process.

Although limited, existing community transportation infrastructure usage is encouraged and INL works with multiple local and state agencies on transportation planning by providing input and sponsoring awareness events to promote employee commuting ridership. In FY 2011, INL worked with local transportation companies to coordinate a schedule for riders to the Blackfoot and Pocatello areas.

The bicycle remains a popular seasonal method of commuting at the Idaho Falls campus with increasing awareness of personal fitness and energy conservation. Facilities have designated bicycle spaces and INL continues to explore the possibility of covered parking for cycling and motor cycle commuters.

Sustainable Site development encompasses an integrated approach during the refurbishment and planning of future onsite facilities and infrastructure, consistent with the INL TYSP. INL encourages walking and bicycling as means of travel within Site boundaries; long-range Site development envisions continuous improvement of a bicycle- and pedestrian-friendly environment.

INL continues to work with the following local planning organizations:

- Idaho Strategic Energy Alliance
- Yellowstone Business Partnership (INL representative is on the Board of Directors)
- Yellowstone-Teton Clean Cities Collation
- Bonneville County Transportation Committee
- Targhee Regional Public Transportation Authority.

9. SITE INNOVATIONS

The energy and environment mission of the Laboratory is derived from research, development, and demonstration capabilities in specific areas of clean energy supply and in developing engineering solutions needed to enable the integration of energy systems. INL provides an internationally recognized applied energy engineering research capability used to assist the U.S. achieve environmentally responsible energy security. Emphasis is placed on advancing deployment of technologies that enhance clean energy development, delivery, use, and efficiency, and addresses management of energy-related materials and environmental consequences.

INL is one of DOE's three recognized "energy" laboratories with a principle focus on nuclear energy R&D. The Laboratory serves a diverse set of customers providing research, development, demonstration, and deployment (RDD&D) that provides impactful and environmentally responsible energy development, delivery and use. INL emphasizes an engineering research and energy systems approach, strongly steeped in technology, testing and demonstration, which is designed to reduce risks associated with deployment of energy technology. This capability is to be underlain by a strong science foundation.

INL focuses on advanced energy system component integration and system design and analyses comprising the following elements: (1) process modeling and analysis, (2) feedstock production and processing, (3) energy integration and heat transfer, (4) energy storage and product synthesis, (5) byproduct management, (6) process and system monitoring, control, and maintenance. This focus couples engineering models with testing, instruments, monitoring, and control schemes to support optimal energy systems design, energy resource optimization, total carbon/water management, and hybrid energy systems. As part of this effort, INL has become an internationally recognized thought leader in hybrid energy systems.

DOE views biofuels as a high priority in achieving its goal to help the U.S. lessen its dependency on oil for transportation. And Department of Defense (DOD), as an end user, is being very aggressive relative to securing drop in biofuels to meet its mandates. The goal of INL's Bioenergy Program is to overcome key technical barriers facing the U.S. bio-energy industry by systematically researching, characterizing and modeling, demonstrating, and harnessing the physical and chemical characteristics of the nation's diverse lignocellulosic biomass resources to produce biofuels and other value-added products more cost-effectively. INL maintains a strong national and international competitive position with biofeedstocks (logistics, preprocessing, characterization), but also maintains capabilities in biochem conversion, thermochem conversion, biopower, strategic analysis, sustainability, and algae. Providing strength to this platform are experts and testing and demonstration equipment, including the Process Demonstration Unit (PDU).

The transition to hybrid electrical and all-electrical light-duty vehicles for personal transportation has the potential to shape the demand curve for electricity in the U.S. However, realization of this advanced technology will require improvements in batteries, energy conversion, and electrical infrastructure—all of which are established areas of INL expertise. The INL's integrated vehicle, energy storage, and grid demonstration and testing laboratory is a regional and national testing and demonstration resource for DOE, DOD, other federal agencies, and industry.

INL is the lead DOE laboratory for field performance and life testing of advanced technology vehicles and DOE has recently identified electrification of light-duty vehicles as its highest priority in helping reduce dependency on oil. The Laboratory provides benchmark data for DOE technology modeling, simulations, and R&D, as well as to fleet managers and other vehicle purchasers for informed purchase, operations, and infrastructure decisions. INL is coordinating plug-in demonstration projects with private companies and city, county, port, and environmental agencies. Onboard data-loggers, cellular modems, and GPS units transmit information from these vehicles to INL researchers for analysis.

INL's applied battery research and diagnostic testing includes thermodynamic life analysis of advanced battery chemistries under development and advanced physical and materials modeling. DOE is heavily invested in qualifying existing and new battery concepts and materials that could dramatically lower the costs and increase the performance of batteries for use in electric vehicles, which in turn will help lessen dependence on oil as a transportation fuel. There has also been increased interest in integrating utility scale batteries, which is of import to greater integration of renewable energy resources and support various hybrid energy system approaches. These applications are also of significant interest to DOD, either at their domestic bases, forward bases, or soldier power. INL is also pursuing relevant research in battery advanced materials and diagnostics.

Given current U.S. interest and investment, traditional renewable energy (e.g., hydropower, wind power, geothermal power, and solar power) has experienced significant growth, over the last several years. As a result, INL has begun to redevelop in areas where it previously had stature in DOE. In addition, INL has longstanding position with DOD addressing renewable energy use in support of aggressive renewable energy consumption and fossil fuel reduction goals. INL's niche in conventional renewable energy is providing applied engineering research to advance geothermal resources, wind power, and water power, as well as practical integration of renewable energy resources. INL is focused on resource assessments, renewable energy grid integration, mechanical design, reservoir assessment and monitoring, heat transfer, and advanced control systems.

Water is a critical resource intricately connected to energy development and is increasingly a critical factor in energy investment and regulatory decisions associated with nuclear, fossil and renewable energy development. The importance of water resources relative to energy will only increase as greater demands are imposed on water resources, in particular in the more arid west, where there is pressure being applied to reduce depletion of aquifers and rivers and protect water resources from contamination. Other needs relate to use of energy in the development and use of water, itself, including for irrigation and desalination. INL focuses primarily on water resources from a perspective of their role in energy development and use, with a greater emphasis on (1) assessing potential impacts on water supply and quality, (2) providing technology, testing, demonstration to responsibly produce/use water, and (3) addressing energy efficiency in support of water production/use. INL brings a number of capabilities to address this area, including modeling, field and laboratory testing, membrane technology, microbiology, and instrumentation.

Advancing energy resource development requires responsibly addressing and mitigating impacts on the environment including on the air shed, soils, water, wildlife, and landscape whether from fossil, renewable energy, nuclear energy infrastructure emplacement. Energy production and distribution require the development and use of multiple natural resources and often compete with other important resource uses such as food production, residential development, recreation, and other industrial applications. Of particular note are impacts associated with oil, gas, and coal development. INL focuses primarily on environmental technology from a perspective of its role in advancing solutions oriented, environmentally responsible, energy development with a greater emphasis on (1) assessing potential impacts on the environment and (2) providing technology development, testing and demonstration to support responsible energy development. Ecosystem and regional-level analysis tools based on Geospatial Information Systems (GIS) and system-dynamics modeling techniques are being developed to analyze energy and natural resource development and use. They also identify systems that address fluctuations in demand and availability of resources and energy in the short and long term. INL researchers have and continue to develop advanced environmental forensics capabilities to detect trace levels of specific chemicals and other small changes in the environment.

10. CLIMATE CHANGE ADAPTATION

The Intergovernmental Panel on Climate Change defines adaptation as, "adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities." The process of understating and planning climate change adaption strategies is still beginning. Specific INL climate change impacts and understanding how to best respond to these impacts is rapidly evolving. Because of this, INL climate change strategic planning will be designed as a continuous, flexible process and subjected to periodic review and revisions.

As with any new national initiative, meaningful and sensible indicators need to be identified or developed. However, it is difficult to develop specific, quantifiable indicators when applied to DOE operations at a national laboratory. That does not mean that INL will ignore operational impacts on climate change. Over the past 5 years, INL has continually demonstrated a willingness to reduce operations impacts. This is evidenced through petroleum use reduction, material recycle, efficiency upgrades, optimizing operations, and millions of research dollars spent on energy research.

To that end, INL will use the following steps to develop, vet, and implement a climate change adaption strategy:

- 1. Prioritize adaptation efforts where vulnerabilities are highest (what is causing the most damage which will result in the biggest benefit when corrected)
- 2. Integrate adaptation into long-term sustainable strategies (policies, operations, buildings, business decisions)
- 3. Strengthen existing programs and capabilities (continued excellence in fleet fuel reductions and research capabilities)
- 4. Develop a robust strategy to allow for rapid deployment in the face of changing policy (applicable efficiently and cost effectively)
- 5. Leverage opportunities from within and outside the laboratory expertise (community involvement, regional planning, national resources; do not reinvent the wheel).

Appendix A Glossary

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Appendix A

Glossary

Alternative Fuel. A vehicle or equipment fuel that is either not petroleum based, or significantly reduces the petroleum content of the fuel. Biodiesel blends such as B20 (20% biodiesel) and Ethanol blends such as E-85 (85% Ethanol) are the more common alternative fuels. Compressed natural gas (CNG) and liquefied natural gas (LNG) are also recognized alternative fuels that are not a blended fuel.

Alternative Fuel Vehicle. Alternative fuel vehicles (AFV) are specially designed to run on an alternative fuel. They can be dedicated to a single alternative fuel such as LNG, or they can be dual fuel capable of operating on both alternative such as CNG or E-85 and gasoline. Diesel engine vehicles that can simply be operated on a biodiesel blend are usually not considered AFVs.

Commissioning. A process of ensuring that all building systems are installed and perform interactively according to the design intent, the systems are efficient and cost effective and meet the owner's operational needs, the installation is adequately documented, and the operators are adequately trained.

Commissioning Authority. The individual hired by, or responsible to, the building owner and is tasked with implementing the commissioning process for a new or existing building. The Commissioning Authority is typically responsible for all aspects of the commissioning process, leads and trains the commissioning team, and witnesses or verifies all system checks or inspections throughout the process. The Commissioning Authority has final jurisdiction for the entire commissioning process.

Continuous Commissioning. Continuous commissioning involves ongoing monitoring and testing of systems as part of a regular maintenance plan to ensure optimum performance and enhanced equipment longevity. Continuous commissioning can be at a system or a building level depending upon the requirements of the stakeholders.

Energy Efficiency. The ability of a building to minimize the amount of energy used for employee safety, health, and comfort. Energy efficiency also applies to the processes that are performed inside the building, which are not necessarily part of the physical structure. Energy efficiency improvements should always be measured by life cycle cost effectiveness, and not by first cost or simple payback.

ESPC. Energy Savings Performance Contracts (ESPC) are projects that are developed, engineered, performed, and funded by an outside contractor called an Energy Services Contractor (ESCo). ESPCs are paid for through the energy savings derived from the project and are intended to be a no-cost turn-key process or project. The annual payments are made to the ESCo with funds that would have been distributed to the utility. ESPCs are especially useful when capital funding is not readily available. DOE sites can take advantage of the Super ESPC program, which provides pre-evaluated ESCos familiar with federal processes.

HVAC. Heating, ventilating, and/or air conditioning (cooling) systems in a building. HVAC systems include all components, controls, and distribution systems needed to deliver conditioned air to the desired point of use.

Indoor Environment. A building's indoor environment includes many factors including the quality of the air in and supplied to the building, temperature levels, and consistency throughout the building, amount of pollutants in the workspace, lighting levels, and quality, levels of unwanted sound, and amount of day lighting.

INL Site. All contractors and activities at the INL Site under the control of the DOE-ID Operations Office, but excludes the Naval Reactors Facility (NRF).

LEEDTM *Rating System.* Leadership in Energy and Environmental Design (LEEDTM) is a tool for green building design to help design teams and owners determine green project goals, identify green design strategies, measure and monitor progress, and document success. The LEEDTM Rating System was developed and is administered by the U.S. Green Building Council (USGBC), which is a national non-profit organization that includes representation from all aspects of the building industry. The LEEDTM Rating System is a point system of five technical categories and four levels of certification: LEEDTM Certified, Silver, Gold, and Platinum.

Low-Cost. Low Cost modifications or repairs may be performed during the commissioning process, but are typically implemented shortly after. Low-cost opportunities typically cost less than \$500 and can be accomplished in bundled groups.

No-Cost. Adjustments or modifications that can be made during the commissioning implementation phase by in-house crafts. These on-the-spot modifications are essentially no-cost other than the time for the craft person to be available. No-cost adjustments should be maximized during the implementation phase.

Re-commissioning. Commissioning that is performed several years after a building, which was previously commissioned, has been in operation to ensure that the building and systems are meeting the original design requirements. Re-commissioning is typically used to identify and correct malfunctions in a building that occur as the building ages and to ensure continued indoor air quality, employee productivity, and energy efficiency. Re-commissioning can also be used to address changes in ownership, building use patterns, and operation and maintenance practices. A building's use and mission often change during the building's life and these changes necessitate the need for re-commissioning to ensure that the building is capable of efficiently meeting its new and/or evolving mission.

Retro-commissioning. Applying the commissioning process to a building that has never been commissioned. Retro-commissioning is sometimes referred to as "Existing Building Commissioning" and is used to compare the building's original design parameters and operational criteria with current design and operational requirements. Retro-commissioning determines if the building is capable of meeting its current mission needs and identifies modifications required to meet those needs. Retro-commissioning then identifies upgrades to the building that will enhance its energy efficiency, tenant comfort and productivity, and indoor air quality. Retro-commissioning as a best practice means using a whole building approach to ensure that the building is operating within well-defined criteria established by the building stakeholders.

Sustainability. The ability of a society to operate indefinitely into the future without depleting its resources. Sustainability includes concepts of green building design and construction, reuse and recycling of materials, reduced use of material and energy resources for building construction and operation, water conservation, and responsible stewardship of the environment adjacent to the building.

Appendix B

Excluded Buildings Self-Certification

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DOE BUILDING EXCLUSION SELF-CERTIFICATION FORM FY 2011

FROM: DOE Idaho Operations Office, Idaho National Laboratory Site Lead Program Office is the Office of Nuclear Energy

TO: Sustainability Performance Office

DATE: January 19, 2012

SUBJECT: SELF-CERTIFICATION FORM FOR THE ENERGY INTENSITY GOAL OF EISA 2007

Each buildings or group of buildings excluded under the criteria for a Part G or Part H exclusion is/are metered for energy consumption and their consumption is reported annually.

If any building has been excluded under the criteria for Part H for impracticability then all practicable energy and water conservation measures with a payback of less than 10 years have been installed. A justification statement that explains why process-dedicated energy in the facility may impact the ability to meet the goal has been provided in the FIMS Report 063.

I certify that the buildings listed on the Excluded Buildings List produced by FIMS as Report 063 dated 14 November 2011, for the Idaho National Laboratory Site on pages 53 through 54 meet the exclusion criteria in *Guidelines Establishing Criteria for Excluding Buildings* published by FEMP on January 27, 2006.

Teresa Perkins

DOE Site Office Official – printed name

DOE Site Office Official – Signature

Date

Contact Information:

Teresa Perkins, Director

Environment and Sustainability Division DOE-ID

Phone: (208)526-1483 eMail: perkintl@id.doe.gov

Ernest.Fossum@inl.gov

INL Energy Manager

Or: Ernest Fossum,

(208)526-2513

ā	HQ Program Office	2						
FIMS S	FIMS Site Name - Number	-	clama National Lass-Scowing	10000				
Property ID	ID Prop Sequence	opuo	Property Name	Exclusion Part	Property Type	Gross	Excluded	
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Appendix C

Consolidated Energy Data Report (CEDR)

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FY 2011 Energy Management Data Report

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 Department of Energy
 Program of Energy
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 Site:
 Idula National Luboratory
 Plane
 (26%) \$26.7513

 Fitcal Year:
 2011
 Date: 12/6/2011

Requirements): See tables

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ENERGY EFFICIENCY IMPROVEMENTS AND FUNDING

1-1. E.O. 13514/OMB Circular A-11 Direct Agency Obligations

The second secon	FY2	1011	Projected	EV 2012	Projected	FY 2015
Commence of the Commence of th		(Thou. 5)		(Thou.5)		(Hhon, 5)
Direct obligations for facility energy afficiency improvements, including facility surveys/asility		52054		\$1,000.0		\$1,000.0
Estimated surreal savings unficipated from obligations (Million BTU)	1,399.2	517,7	5,587,9	580.1	6,000,0	\$100.0
Estimated around savings anticipated from obligations (Thomsands Gal)	0.0	10.0	1,970.0	53.0	0.0	50.0

1.1. E.O. 13514/OMB Circular A 11 Awarded Energy Savings Performance Contracts (ESPCs)

	Anunal savings (10° 6 BTU)	(Number Thou, 8)
Number of PSPC Took/Delivery Orders awarded in fiscal year & acrusal energy (Million B1U) owners	0.6	0.0
linestraest value of ESPC Task/Delivery Orde fiscal year	en kabassa es	20.0
Amount privately immeed under ESPC Task/I awarded in fixed year	Delivery Ceders	30.0
Countain to purpose of ESPCs year relative to the baseline spending	awarded in a seal	\$0.0
Total contract award value of PSPCs awarded (sum of contractor payments for debt repayme other negotimed performance period services)		30.0
Tetal payments made to all PSPC contractors	in fiscal year	\$3,206.5

1.3. E.O. 13514/OMB Circular A 11 Awarded Utility Energy Services Contracts (UESCs)

	(10° 6 HTU)	(Number/Thou. 5)
Number of UESC Task/Delivery Orders awarded in fiscal year & account energy (Milton BTU) savengs	0.0	0.0
Investment value of LESC Task/Delivery Co fiscal year	ders awarded in	20.0
Amount privately financed under UESC Instrumented in fiscal year	Delevery Ordens	30 (
Coundative cost surrags of HESCs awarded relative to the husefine spending	in fiscal year	\$0.0
Total contract award value of UESCs awards (num of payments for eight repayment and of performance period services)	PERSONAL PROPERTY AND ADDRESS OF THE PERSON ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON ADDRESS OF THE PERSO	\$0.0
Total payments made to all UESC contractor	nin fired year	\$0.0

1 4. EPAct 1992 Training

	(Number)	(Thun.3)
Number of personnel trained in PY 2011/Expenditure	21	323.5

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FY 2011 Energy Management Data Report

 Programe
 Department of Energy
 Prepared by:
 Ennest L, Found

 Site:
 Idaho National Laboratory
 Phone:
 (708) 526-7513

 Fiscal Year:
 2011
 Date:
 12:6/2011

Requirement(s): See tables

Instructions: Complete cells in courge. The information requested is for completing DOE's Annual Energy Report.

Source: Site

1-5a. EPAct 2005 Mesering Of Electricity Use

(Note: If a building has an advanced and a standard meter, only account for the advanced meter.)

	# of "Appropriate"	Stand	and Meters	Advan	red Meters		Lotal	Total to el
Hired Year	Buildings for EPAct 2005 (or those that can be cost effectively metered)	of Buildings with Standard Motors	Estimated Amount of Electricity Metered (kWh'Yr)	with Advanced		of Appropriate Buildings for Metering	Cumulative % of "Appropriate" Buildings Metered	Electricity Metered (ut Individual buildings or
2010 Report	86	23		0	0	13.0	27.1%	15.01
2011 Report	62	49	73,121,449	36	51,021,034	85,0	137.1%	53,01
2012 Planned	64	27	43,449,949	60	98,595,831	87.0	135,9%	61.01
2013 Planned	64	27	43,449,949	195	167,169,153	132.0	206,3%	90.0%
2014 Housed	64	27	43,449,949	195	167,169,153	172.0	J06.3%	90,01
2015 Planned	61	27	43,449,949	195	167,169,153	132.0	2063%	90.01

1-5h. EISA 2007 Metering Of Natural Gas Use

(Note: If a building has an advanced and a standard meter, only account for the advanced meter.)

	" of "Appropriate"	Stand	ard Meters	Advan	ced Meters		fetal	Total Se of Natural
Final Year	Bolldings for EPAcs 2005 (or those that can be cost effectively metered)	# of Buildings with Standard Meters	Estimated Amount of Natural Gas Metered (CEYr)	6 of Buildings with Advanced Meters		Fef Appropriate Buildings for Metering	Cumulative "c of "Appropriate" Bulldings Metered	Gus Metered (at individual buildings or process level)
2010 Report	20	20		- 0	0	20.0	100.0%	100.0%
2011 Report	19	19	29,762,076	. 0	0	19.0	100.0%	100.016
2012 Planned	20	20	36,000,666	0	0	20,0	100,0%	106,610
2013 Planned	21	7.1	31,000,000		0	21.0	100.0%	166,0%
2014 Planned	21	21	31,000,000		0	21.0	100,0%	100.0%
2015 Plumed	21	21	31,000,000	0	0	21.0	100.0%	100,0%

1-5c. EISA 2007 Metering Of Steam Use

(Note: If a building has an advanced and a standard meter, only account for the advanced meter.)

	" of "Appropriate"	Stand	and Meters	Advin	ced Meteri		Foral	I otal "- of Steam
Fired Year	Buildings for EPAct 2005 (or those that can be cost effectively metered)		Estimated Amount of Steam Metered (Btu'Yr)		Estimated Assume of Steam Matered (Btu Yr)	4 of Appropriate Bulldings for Metering	Consulative "to of "Appropriate" Buildings Metered	Metered (at individual buildings or process level)
2010 Report	0	0	0	-0	0	0.0	3DMA(0)	0.0%
2011 Report	0	0	0	0	. 0	0.0	#D(V/01	0.0%
2012 Planned	.0	0	0	- 0	0	0.0	#DIV/0	0.0%
2013 Planned	0	0	0	0	0	0.0	#DIV/0	0.000
2014 Planned	0	0	-0	0	0	0.0	HERV/00	0.0%
2015 Planned	- 0	Ü	0	- 0	. 0	0.0	#DIV/03	0.0%

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FY 2011 Energy Management Data Report

Department of Energy Prepared by: Ernet L. Focum Sites Idahe National Laboratory Phones (208) 526-2513 2011 Fiscal Years Dater 12/5/2011

Requirement(s): See tables

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1.5d. DOE O 436.1 & SSPP Metering Of Chilled Water Use

(Note: If a building has an advanced and a standard mater cally account

	# of "Appropriate"	Stand	ard Meters	Advan	cod Meters		Tetal	Total *s of Chilled
Fluid Year	Buildings for EPAct 2005 (or those that can be cost effectively metered)		Estimated Amount of Chilled Water Metered (Bta/Ve)	with Advanced	Estimated Amount of Chilled Water Metered (Btn Yr)	# of Appropriate Buildings for Mesering	Cumulative % of "Appenpriate" Buildings Metered	Water Metered (at individual buildings or process level)
2010 Ecport	0	0	0	0	0	0.0	WDIV/O	0.0%
2011 Report	0	0	0	.0	0	0.0	//DIV/0!	0.0%
2012 Planned	0	0	0	0	0	0.0	ADIV/0	0.0%
2013 Planted	0	0	- 0	-0	0	0.0	//DIV/b	0.0%
2014 Placed	0	0	0	0	0	0,0	ADIV/DI	0.0%
2015 Planted	0	0	- 0	0	10	0.0	ADIV/08	0.0%

1-5e, Water Management Best Practice Metering Of Water Use (Note: If a building has an advanced and a standard meter, only account for the advanced meter.)

	" of "Appropriate"	Stand	ard Meters	Advan	red Meters		Intel	Total % of Water
Fited Year	Bolidings for FPAct 2005 (or those that can be cost offertively metered)	# of Buildings	Estimated Amount of Water Matered (Gal/Yr)			Appropriate Buildings for Metering	Cumulative % of "Appropriate" Buildings Metered	Metered (ut individual buildings or process level)
2010 Report	TBD	19	0	30		19.0	#VALUE!	14.0%
2011 Report	16	16	40,000,000	0	0	16,0	100,0%	4.5%
2012 Planted	THO	17	40,000,000	10	- 0	17.0	WALUE	4.5%
2013 Planned	TBD	18	42,500,000	0	0	18.0	#VALUE	5.0%
2014 Planned	TRO	18	45,999,000	0	0	18.0	WALUE	5.0%
2015 Planted	THD	18	45,869,000	0	- 0	18.0	SVALUE	5.0%

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Requirement(2) NECPA, EPAct 2005, EBA 2007, DOE 0.436.1, E.O. 13514

INSTITUTION: Provide FY 2011 energy consumption and cost for each quarter by energy type. FY 2011 square footage will be provide after the PIMS amplied on November 14 via Program Offices to the sites for early into this worksheet. Review the quality control columns and assure the information is correct, especially for baseline years. Finally, automatic raculation formulas have been set up for energy intensity, water intensity. ILA consumption and GHG emissions current performance status.

Source: Site Lab EMS4

	2	Property Transfer		25	Potable Water	Vater		0.4	ILA		-		Ð	GHG Emissions	2				
	-	Energy Intensity			Intensity	ity		**	Consumption		Z	- 4	Scope 1	Scope 2	Scope 3	Biogenic			
	2003	306,35,135,909	921	2007		38.164		2010	0,000	6		2008			9 912:461	0,000			
	2011	1711	21	2011		34,082		2011	0.000	6,	~	2011	1,6	14,064	926	0			
	% Change	23.1%	56	9n Change		-10.7%		⁶ h Change	NA	71		9n Change	21,1%	1,5%	6 1.5%	NA			
				Energy Consumption and Cost	ption and	Cost						B	Estimated GHG Emissions	3 Emissions			Qualit	Quality Control	
PSO Site#	s Site	Category	Subcategory	Usage Unit	K	QTR Usas	Usage Amount	9,01×119,0	Cost (1,000 S)	Cost (1,000 S) Additional Information	Main Site Zip Code	Scope	Anthropogenic MtCO;e	Biogenic MrCO ₂ e	Scope 3 - T&D Unige Lors, MCO ₂ e "u Change	Usage % Change	Cost "to Change	STUNIT	S/Unit % Change
602	INI-1	Buildings	Electricity	Megawatt Hour	2003 1	6,637,139		22,645.918	\$438,171		83415	ei	2,731,359	0.000	719,917			\$0.07	
602	INI-I	Buildings	Electricity	Megawait Hour	2004	6,438,419		21,967.886	\$418.629		83415	2	2,649,581	0.000	174.531	-3.09%	4.67%	\$0.07	-1.53%
602	FIN	Buildings	Electricity	Megavvatt Hour	2005	6,539,291	Î	22,312.061	\$424,109		83415	ei	2,691.092	0.000	177,265	1.54%	1.29%	\$0.06	-0.250 ₀
602	INIT	Buildings	Electricity	Megawatt Hour	2006 1	6,817,336		23,260.750	\$418,313		83415	64	2,805,515	0.000	184,802	4.08%	-1.39%s	20.08	-5.70%
602	INLI	Buildings	Electricity	Megawatt Hour	2007 1	7,145,338		24,379.893	\$402.385		83415	53	2,940,497	0,000	193.693	4.59%	-3,96%	\$0.06	-8.96%
209	INIT	Buildings	Electricity	Megawatt Hour	2008 1	8,123,346	1	27,716,857	\$431,062		83415	2	3,342,973	0.000	220,205	12,04%	6,65%	\$0.05	-6.12%
602	INL	Buildings	Electricity	Megawatt Hour	2009 1	8,458,365		28,859,941	\$421,007		83415	es	3,480.842	0.000	229,287	3,96%	-2.39%	\$0.05	-6.6199-
602	I-INI	Buildings	Electricity	Megawan Hour	2010 1	8,818,594		30,191,403	\$453.623		83415	2	3,641,432	0.000	239.865	4,41%	7.19%	\$0.05	2.91%
602	IVIVI	Buildings	Electricity	Megawatt Hour	2011 1	8,793,955		30,004,974	\$456,210		83415	41	3,425,620	0:000	225.649	-0.62%	0,57%	\$0.05	1.18%
602	INI-1	Buildings	Electricity	Megawatt Hour	2003 3	6,467.007	X	22,065,428	\$430,960		83415	**	2,661,345	0.000	175,305			20.02	
602	INI	Buildings	Electricity	Megavatt Hour	2004 2	6,487,637	8	22,135,817	\$425.627		83415	2	2,669.835	0.000	175.865	0.32%	-1.25%	\$0.07	-1.58%
602	PIN	Buildings	Electricity	Megavati Hour	2005 2	6,784,907		23,150,103	\$425,909		83415	2	2,792,170	0.000	183.923	4.38%	0.07%	\$0.06	4.51%
602	INIT	Buildings	Electricity	Megawull Hour	2006 2	6,931,356		23,649,787	\$423.860		83415	2	2,852,437	0.000	187.893	2.11%	-0.48%	80.08	-2.65%
209	INI-1	Buildings	Electricity	Megnwan Hour	2007 2	7,706,360		26,294,100	\$425,507		83415	2	3,171.372	0.000	208.901	10.06%	0.39%	\$0.06	-10.75%
602	INI	Buildings	Electricity	Megavast Hour	2008 2	8,414,602	Ï	28,710,622	\$436,768		83415	2	3,462,833	0.000	228.100	8,42%	2,58%	\$0.05	-6.38%
602	INI	Buildings	Electricity	Megawat Hour	2009 2	8,432,430		28,771.451	\$423,732		83415	**	3,470,169	0.000	228.584	0.21%	-3.08%	\$0.05	+3.29%
602	INF-I	Buildings	Electricity	Megawatt Hour	2010 2	8,293,496	3	28,297,408	\$452,090		83415	2	3,412,994	0.000	224.817	-1.68%	6.27%	\$0.03	7,82%
602	INLI	Buildings	Electricity	Megawatt Hour	2011 2	8,913,188	42	30,411,797	3469.823		83415	7	3,472,066	0.000	228.708	6.95%	3.77%	\$0.05	-3.4296
602	PMT-I	Buildings	Electricity	Megawaii Hour	2003 3	6,500,997		22,181,402	\$121,989		83415	2	2,675,333	0.000	176.227			20.02	
602	INI'I	Buildings	Electricity	Megawatt Hour	2004 3	6,203.397		21,165,991	\$408.343		83415	61	2,552,863	0.000	168 160	4.80%	-4.08%	\$0.07	0.69%
209	INL	Buildings	Electricity	Megawaft Hour	2002	6,388,105		21,796.214	\$389.186		83415	2	2,628.875	0.000	173.167	2.89%	-4.92%s	\$9.06	-8.039 is
602	INIT	Buildings	Electricity	Megawaft Hour	2006 3	6,681,166		22,796.138	\$385.866		83415	ri.	2,749,478	0.000	181.111	4.39%	-0.86%	\$0.08	-5.49%
209	INL	Buildings	Electricity	Megawan Hour	2007 3	7,512,078		25,631,210	\$384,883		83415		3,091,420	0.000	203,635	11.06%	-0.26%	\$0.05	-12,72%
209	ININ	Buildings	Electricity	Megawatt Hour	2008 3	8,116,047		27,691,952	\$414,042		83415	ri	3,339,969	0,000	220,007	2,449%	7,04%	\$0.03	-0.43%
602	INL	Buildings	Electricity	Megawait Hour	2009 3	8,085,418		27,587,446	\$401,243		83415	61	3,327,365	0.000	219,177	-0.38%	-3.19%	\$0.05	-2.80%
602	INIT	Buildings	Electricity	Megawatt Hour	2010 3	8,501,971	1	29,008,725	\$468.133		83415	**	3,498,787	0,000	230.469	4.90%	14,29%	\$0.06	9.87%
602	INI-I	Borldings	Electricity	Megawatt Hour	2011 3	8,718,650	St. + 18	29,748,034	\$455,762		83415	ž.	3,396,285	0.000	223 717	2490,0	-2,71%	\$0.05	-5.33%a
602	INI-I	Buildings	Electricity	Megawan Hour	2003 4	6,847,412	į	23,363,370	\$444.093		83415	61	2,817,892	0,000	185.617			\$0.06	
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			76	*	Energy Consumption and Cost	ption and	Cost						S	Estimated GHG Emissions	G Emissions			Quali	Quality Control	
PSO	Site #	Site	Category	Subcategory	Usage Unit	74	QTR Us	Usage Ansunt	BTU x 10" 6	Cost (1,808 5)	Cost (1,000 5) Additional Information	Main Site Zip Code	Scope	Anthropogenic MtCO ₂ e	Biogenic MtCO ₂ e	Scape 3 - T&D Loss, MtCO2e	Usage 95 Change	Cost 95 Change	\$/Unit	\$/Unit
SE SE	505	INL	Baildings	Electricity	Megawatt Hour	2005 4	6,65			\$403.783		83415	2	2,754,629	0.000	181.450	2,409%	-4.21%	\$0.08	-6.77%
E	602	INL	Buildings	Electricity	Megawatt Hour	2006 4	96'9			\$387.485		83415	c1	2,843,497	0.000		3.13%	4.21%	\$0.06	-7,57%
艺	602	FINI	Buildings	Electricity	Megawall Hour	2007 4	7,82	7,826.279 20		\$397.223		83415	2	3,220.722	0.000	212.152	11.71%	2.45%	\$0.08	-10.49%
NE	209	INI-I	Buildings	Electricity	Megawall Hour	2008 4	90'6	9,006.621 30	30,730.591	\$440.082		83415	2	3,706.464	0.000	244.149	13.11%	9.74%	\$0.05	-3.87%
NE	602	INF	Buildings	Electricity	Megawatt Hour	2009 4	8,62	8,624,728 29	29,427,572	\$441.175		83415	6)	3,549,305	0.000	233,796	-4.43%	0.25%	\$0.0\$	4,48%
NE.	209	INL	Buildings	Electricity	Megawatt Hour	2010 4	9,04	9,047,672 30	30,870,657	\$464.488		83415	61	3,723.358	0.000	245.261	4.67%	5.02%	\$0.05	0.36%
NE	209	INL	Buildings	Electricity	Megawaft Hour	2011 4	9,6	9,678.327 3	33,022,452	\$502.896		83415	63	3,770.120	0.000	248.342	6.52%	7,649%	\$0.08	1.20%
ij	602	INI-I	Buildings	Puel Oil	1,000 Gallons	2005 4	0.000		0.000	\$0.000		83415	1	0.000	0.000	0.000	#DIV/0!	//DIV/0!	//DIV/0!	#DIV/0!
罗	209	INI-1	Buildings	Fuel Oil	1,000 Gallons	2007 4	2.516		347.208	\$6.085		83415	1	25.766	0.000	0.000	100.00%	100,009%	\$2,42	#DIV/0!
E	602	INIT	Buildings	LPG	1,000 Gallons	2003	0.000		0.000	\$0.000		83415	1	0.000	0.000	0.000			#DIV/0!	
NE	602	INIT	Buildings	LPG	1,000 Gallons	2004 1	900.0		0.552	\$0.005		83415		0.035	0.000	0.000	100.00%	100.00%	\$0.83	#DIV/0!
NE	602	INF	Buildings	The	1,000 Gallons	2005 1	900.0		0.361	\$0,008		83415	1	0.035	0.000	0.000	1.64%	40,48%	\$1.38	39.48%
E E	602	INIT	Buildings	LPG	1,000 Gallons	2008 1	0.199		18.308	\$0.389		83415	1	1.158	0.000	0.000	96.93%	97.84%	\$1,95	29,55%
NE	209	INI	Baildings	LPG	1,000 Gallons	2 5002	0.000		0.000	\$0.000		83415		0.000	0.000	0.000			#DIV/0:	
N	602	INI	Buildings	LPG	1,000 Gallons	2004 2	0.000	Ĭ	0.000	\$0.000		83415	1	0.000	0.000	0.000	#DIV/0!	(DIV)0!	(IDIV)0!	#DIV/0t
NE	602	INF-I	Buildings	LPG	1,000 Gallons	2002	0.010		0,892	\$0.012		83415	1	0.056	0.000	0.000	100,00%	100.00%	\$1.28	#DIV/0!
NE	602	INF	Buildings	LPG	1,000 Gallons	2004 3	0.013		961.1	\$0.018		83415	1	0.076	0.000	0.000	25.38%	31,11%	\$1.38	7.67%
NE	602	INI	Buildings	IPG	1,000 Gallons	2002 3	0.003		0.294	\$0.004		83415	-	610.0	0.000	0.000	-306.25%	-318.60%	\$1.34	-3.04%
NE	-602	INF	Buildings	LPG	1,000 Gallons	2006 3	0.000		0.000	\$0,000		83415	1	0.000	0.000	0.000	#DIV/0!	(/DIV/0!	(DIV/0)	#DIA/10;
NE	602	INFI	Buildings	Natural Gas	1,000 Cubic Feet	2003 1	8,08	8,085,839 8,	8,312,242	\$46.117		83415	-	441.147	0.000	0.000			\$0.01	
E.	209	INC	Buildings	Natural Gas	1,000 Cubic Feet	2004 1	7,92	7,929,292 8,	8,151,312	562.401		83415	1	432.606	0.000	0.000	-1.97%	26,10%	\$0.01	27.53%
NE	209	INF-I	Buildings	Natural Gas	1,000 Cubic Feet	2005 1	6,93	6,950,145 7,	7,144,749	361.116		83415	1	379.186	0.000	0.000	-14.09%	-2.10%	\$0.01	10.51%
N	602	INI	Buildings	Natural Gas	1,000 Cubic Feet	2006 1	7,16	7,106,305 7,	7,305,282	\$80,389		83415	1	387,706	0.000	0.000	2,20%	23.97%	50.01	22.27%
NE	209	INI-1	Buildings	Natural Gas	1,000 Cubic Feet	2007 1	8,36		8,595,426	\$91.646		83415	1	456,176	0.000	0.000	15.01%	12.28%	\$0.01	-3.21%
NE	209	I-IVI	Buildings	Natural Gas	1,000 Cubic Feet	2008 1	9.13	9,156,276 9,	9,412,652	\$94.883		83415	-	499.548	0.000	0.000	8.689/a	3,41%	\$0.01	-5.77%
NE	602	INI	Buildings	Natural Gas	1,000 Cubic Feet	2009 1	11,2	11,292,629 11	11,608.823	\$122,084		83415	1	616.103	0.000	0.000	18,92%	22.28%	10'08	4,15%
E	602	INF	Baildings	Natural Gas	1,000 Cubic Feet	2010 1	11,8	11,884,772 13	12,217,546	\$97.469		83415	1	648.410	0.000	0.000	4.98%	-25.25%	10.08	-31.82%
NE	209	INI	Baildings	Natural Gas	1,000 Cubic Feet 2011	2011 1	12,	12,749,273	13,106,253	\$104.802		83415	1	695.575	0.000	0.000	6.78%	7,00%	10.02	0.23%
NE	602	INI	Buildings	Natural Gas	1,000 Cubic Feet	2003 2	6,2	6,279,340 6,	6,455,162	\$35,962		83415		342,588	0.000	0.000			10.08	
NE	602	INIT	Buildings	Natural Gas	1,000 Cubic Feet	2004 2	8,35	8,391.368 8,	8,626,326	\$66,310		83415	1	457.816	0.000	0.000	25.17%	45.77%	\$0.01	27.53%
NE	209	INI-I	Buildings	Natural Gas	1,000 Cubic Feet	2002 2	0.097			\$0.124		83415	1	0.005	0.000		нинининин	######################################	\$1.28	99.38%
NE	209	INIT	Buildings	Natural Gas	1,000 Cubic Feet	2 9002	7.47	7,476.916 7,	7,686,270	\$85,079		83415	1	407.926	0.000	0.000	100.00%	99.85%	\$0.01	-11134.40%
NE	602	INF-I	Buildings	Natural Gas	1,000 Cubic Feet	2007 2	99'6	9,667,119 9,	9,937,798	\$104.053		83415	1	527,419	0.000	0.000	22,66%	18.23%	\$0.01	-5,72%
Z	209	INE	Buildings	Natural Gas	1,000 Cubic Feet	2008 2	11,4	11,468,452 11	11,789.569	\$119.338		83415	1	625.696	0.000	0.000	15.71%	12.81%	10.08	-3.44%
NE	209	INFI	Buildings	Natural Gas	1,000 Cubic Feet	2 6002	11,8	11,877,595 13	12,210.168	\$125.778		83415	1	648.018	0.000	0.000	3,449%	5.12%	\$0.01	1.74%
NE	209	INI	Buildings	Natural Gas	1,000 Cubic Feet	2010 2	10,8	10,851,212 11	11,155,046	\$90.803		83415	1	592.021	0.000	0.000	-9.46%	-38.52%	\$0.01	-26.55%
NE.	602	INI	Buildings	Natural Gas	1,000 Cubic Feet	2011 2	12,4	12,464,016 12	12,813,008	\$103.073		83415		680.012	0.000	0.000	12,94%	11.90%	10.08	-1.19%
N	602	INL	Buildings	Natural Gas	1,000 Cubic Feet 2003	2003 3	1,65	1,698.060 1,	1,745.606	\$10.643		83415	1	92.643	0.000	0.000			\$0.01	
思	602	INI-I	Buildings	Natural Gas	1,000 Cubic Feet	2004 3	0,73	1,737.245 1,	1,785.888	\$14.814		83415	1	94.781	0.000	0.000	2.26%	28.16%	10.08	26.50%
NE	602	INF-I	Buildings	Natural Gas	1,000 Cubic Feet 2005	2005 3	2,81	2,819.108 2,	2,898.043	\$26.042		83415	1	153.805	0.000	0.000	38,38%	43.11%	\$0.01	2,699%
2	602	INE	Buildings	Natural Gas	1,000 Cubic Feet 2006	2006 3	1,21	1,213.579 1,	1,247,559	\$14.526		83415	7.	66.210	0.000	0.000	-132.30%	-79.28%	10.08	22.82%

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PSO SI	Site # Site	e Category	Subcategory	Usage Unit	P. P.	QTR Usage Amount	-	BTU _{3.10} °6 Ce	(1,000 S)	Cost (1,006 5) Additional Information	Main Site Zip Code	ite Scope	Anthropogenic MtCO ₂ e	ile Biogenie MicO ₂ e	Scope 3 - T&D Loss, McCO ₂ e	&D Usage Dr his Change		Cost S	S.Unit 8	S/Unit
602	2 INL-I	Buildings	Natural Gas	1,000 Cubic Feet 2007	2 700%	1,989,816	2,045.531	31 \$22.836	836		83415	1	108.560	0.000	0.000	39.01%	36.39%	10.02	4,30%	360
602	2 INL-1	Buildings	Natural Cas	1,000 Cubic Feet 2008	2008 3	2,334.918	2,400.296	96 \$24.363	363		83415	1	127/388	0.000	0.000	14,789%	6.27%	\$6.01	966.6-	366
602	2 INL-I	Buildings	Natural Gas	1,000 Cubic Feet	2009 3	2,415,713	2,483.353	53 \$26,849	849		83.115	1	131,797	0.000	0,000	334%	9.36%	10.02	6.12%	9%
602	2 INL-I	Buildings	Natural Gas	1,000 Cubic Feet 2010	2010 3	3,276,528	3,368,271	71 \$29,092	260		83415	1	138,761	0.000	0.000	26.270's	7.71%	10:08	-25.1896	89%
209	INI-I	Buildings	Natural Gas	1,000 Cubic Feet 2011	2011 3	3,677,595	3,780,568	68 532.174	174		83415	1	200.642	0.000	0.000	10.91%	0,485.6	10.08	-1.49%	19,0
209	I-INI 2	Buildings	Natural Gas	1,900 Cubic Feet	2003 4	492.338	506,123	\$ \$4.298	98		83415	1	26,861	0,000	0.000			10.08		
209	2 INI-I	Buildings	Natural Gas	1,000 Cubic Feet	2004 4	589,525	606,032	\$5,635	35		83415	-	32,163	0.000	0.000	16,49%	23,73%	10'08 %	8,67%	0.0
209	INI-1	Buildings	Natural Ges	L,000 Cubic Feet 2005	1005 4	640,834	658,777	7 \$6,385	58		83415	1	34,963	0.000	0.000	8.01%	11.75%	s \$0.01	A.07%	0,0
503	2 INIT-1	Buildings	Natural Gas	1,000 Cubic Feet 2006	\$ 9000	749,952	770.951	126:88	21		83415	1	40,916	0.000	0.000	14.5596	28.43%	10.08 .	16.24%	496
602	2 INI-1	Buildings	Natural Gas	1,000 Cubic Feet 2007	2007 4	823.472	846,529	\$ \$9.264	64		83415	1	44,927	0.000	0.000	8.93%	3,70%	10.02	-5.74%	19.6
602	2 INC-1	Buildings	Natural Gas	1,000 Cubic Feet 2008	\$ 800%	1,605.238	1,650.185	85 \$17.826	826		83415	1	87.579	0.000	0.000	48.70%	48.03%	10.08 6	-1.31%	961
505	2 INL-I	Buildings	Natural Gas	1,000 Cubic Feet 2009	F 6003	1,886.322	1,939.139	39 \$20.740	740		83415	1	102,914	0.000	0.000	14,90%	14.05%	10.08 %	-1.00%a	19.a
602	2 INL-1	Buildings	Natural Gas	1,000 Cubic Feet 2010	1010 4	1,018.332	1,046.845	77.177	77.		83415		\$5,558	0.000	0.000	-85.24%	-126.00%	10:08 %	-22.01%	11%
602	2 INI-1	Buildings	Natural Gas	1,000 Cubic Feet 2011	4 110	871.193	895.586	87.799	56		83415	-	47,531	0.000	0.000	-16.89%	-17,67%	10.08 %	-0.67%	00
209	INI-1	Buildings	Square Feet	1,000 Square Feet 2003	2003 4	1,127,600					83415	NA	0.000	0.000	0.000			80.00		
602	2 INL-I	Buildings	Square Feet	1,000 Square Feet 2004	2004 4	1,050.646					83415	NA	0.000	0.000	0.000	-7.32%	#DIA/0	00.00	10/AIG#	7/0!
602	2 INI-1	Buildings	Square Feet	1,000 Square Feet 2005	\$ 5002	1,070.843					83415	NA	0.000	0.000	0.000	1.89%	//DIV/0!	90.08	0/AIC#	10//
602	2 INL-1	Buildings	Square Feet	1,000 Square Feet 2006	£ 900;	1,129,437					83415	NA	0.000	0.000	0.000	5.19%	i0/AIG#	00.08	(DIV/0)	10/2
209	2 INL-I	Buildings	Square Feet	1,000 Square Feet 2007	1007 4	1,203.864					83415	NA	0.000	0.000	0.000	6.18%	10/AIG#	00.08	i0//JG# (10//
209	INIT I	Buildings	Square Feet	1,000 Square Feet 2008	2008 4	1,204,682					83415	NA	0.000	0.000	0.000	0.07%	#DIV/0	N \$0.00	(ADIV/0)	10/0
602	2 INI-I	Buildings	Square Feet	1,000 Square Feet 2009	2009 4	1,317.096					83415	NA	0.000	0.000	0.000	8.53%	#DIV/0	90.00	#DIA/0	7701
209	INI-I	Buildings	Square Feet	1,000 Square Feet 2010	2010 4	1,315,720					83415	NA	0.000	0.000	0.000	-0.10%	#DIV/0	00.08	#DIA/0	70/7
602	2 INII	Buildings	Square Feet	1,000 Square Feet 2011	2011 4	1,313,025					83415	NA	0.000	0.000	0.000	-0.21%	#DIA/0	20.00	#DIV/0!	7/01
602	2 INI-1	Water	Potable	Million Gallons	2007 1	9,708		\$20,183	183		83415	NA	0:000	0,000	0.000			\$2,08		
602	2 INL-I	Water	Potable	Million Gallons	2008 1	13,325		\$20.173	173		83415	NA	0.000	0.000	0.000	27,14%	-0.00.0-	15.15	-37.32%	32%
209	INIT Z	Water	Potable	Million Gallone	1 6002	12.390		\$24,600	009		83415	NA	0.000	0.000	0.000	-7.54%	18.00%	66.18 6	23.75%	20%
209	I-INI 2	Water	Potable	Million Gallons	2010 I	10.791		\$21.809	608		83415	NA	0.000	0.000	0.000	-14.82%	-12.80%	% \$2.02	1,76%	96
602	2 INL-I	Water	Potable	Million Gallons	2011 1	8,450		\$22,038	938		83415	NA	0.000	0.000	0,000	-27.709n	1.04%	\$2.61	22,51%	100
602	2 INL-I	Water	Potable	Million Gallons	2007 2	7.839		\$17,043	043		83415	NA	0.000	0.000	0.000			\$2.17		
602	2 INL-I	Water	Potable	Million Gallons	2008 2	13.151		\$19.829	829		83415	NA	0.000	0.000	0.000	40.399%	14,05%	81.51	-44.19%	9661
209	I-INI 2	Water	Potable	Million Gallons	2009 2	11.649		\$22.987	786		83415	NA	0.000	0.000	0.000	-12,89%	13,74%	s \$1.97	13,59%	996
602	2 INL-I	Water	Potable	Million Gallons	2010 2	10.101		\$20,370	370		83415	NA	0.000	0.000	0.000	-15.33%	-12,85%	% \$2.02	2.15%	9,6
602	2 INL-I	Water	Potable	Million Gallons	2011 2	7,408		818.620	620		83415	NA	0.000	0.000	0.000	-36.35%	-9.40%	\$2.51	96LZ'61	196
209	2 INL-1	Water	Potable	Million Gallons	2007 3	12,839		\$26.663	663		83415	NA	0.000	0.000	0.000			\$2.08		
209	I-INI Z	Water	Potable	Million Gallons	2008 3	17,093		\$26,241	241		83415	NA	0.000	0.000	0.000	24.89%	-1.61%	\$1.54	-33,27%	0,000
209	INT-I	Water	Potable	Million Gallons	2009 3	15,041		\$32,225	225		83415	NA	0.600	0.000	0.000	-13.64%	18.57%	o \$2.14	28,34%	961
602	2 INL-1	Water	Potable	Million Gallons	2010 3	15.396		\$32,644	644		83415	NA	0.000	0.000	0.000	2,31%	1.28%	\$2,12		905
602	2 INI-1	Water	Potable	Million Gallons	2011 3	11.526		\$32,635	635		83415	NA	0.000	0.000	0.000	-33.58%	-0.03%	\$22.83	25.12%	29,0
209	INI-I	Water	Potable	-1	2007 4	15,558		\$31.899	668		83415	NA	0.000	0.000	0.000			\$2.05		
602	FINI 7	Water	Potable		2008 4	27.159		\$12.678	878		83415	NA	0.000	0.000	0.000	42.71%	25.26%	25.18 8		9681
602	PAIL T	Media	1177.4	a chiefe or the													1			

		, in the
S/Unit 96 Change	2,51%	10.63%
\$/Unite	\$2.18	\$2.44
Cost.	11,1196	-13.83%
Scope 3 - T&D Usage Loss, MtCO2e 9n Change	8.82%	-27.36%
ope 3 - T&D	0.000	0.000
Bingenic Sc MtCO ₂ e La		
Anthropogenic Bi MtCO ₂ e M	0.000	0.000
Scope Anthrep	0.000	0.000
te Sei	NA	NA
Main Sil	83415	83415
Cost (1,000 5) Additional Information Zip Code		
Cost (1,000 \$)	\$48.192	\$42,337
BTU x 1076		
Usage Amount	22,119	17,367
OTR 1		
N.	2010 4	2011 4
Usage Unit	Million Gallons	Million Gallons
Subcategory	Potable	Potable
Category	Wafer	Water
Site	INL	
Site #		2 INL-I
s osa	209	ш
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Dil. FY 2012 (EDR 127-17 ales § 2 Eddy & Water (602). 1(7/2012) Or Pid.

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Facilities Energy Consumption and Cost

Renticement(2) NECPA, EPACE 2005, EESA 2007, DOE, O. 436.1, E.O. 13514

<u>Institutions:</u> Provide FY 2011 energy consumption and cost for each quarter by energy type. FY 2011 square footage will be provide after the FMS sampshot on November 14 via Program Offices to the sites for entry into this worksheet. Review the quality control columns and assume the information is correct, especially for baseline years. Finally, automatic calculation formulas have been set up for energy intensity, water intensity and GHG emissions current performance status.

Source, Site Lab EMIST.

7.1 State Spinish Libracy PPA Connecimiento PPA							Potabl	Potable Water			ПА				3	GHG Emissions			200040000	And the latest decision	
3480 3450 <th< th=""><th></th><th>Ī</th><th>E</th><th>Energy Intensity</th><th></th><th>FY</th><th>Inte</th><th>maity</th><th></th><th>M</th><th>Consumption</th><th></th><th>ľ</th><th>1</th><th>Scope 1</th><th>Scope 2</th><th>Scope 3</th><th>Biosenic</th><th></th><th></th><th></th></th<>		Ī	E	Energy Intensity		FY	Inte	maity		M	Consumption		ľ	1	Scope 1	Scope 2	Scope 3	Biosenic			
			2003		1=	200		207,655	Ka I	2010											
			2011			201		209.557		2011				201	18.	17					
Single			En Change		- B1	66 Chang	9	0.9%		% Change				Vo Chang							
61 314 All contacts Al						Energy Consum	ption a	nd Cost						2	stimated GF	G Emissions			Qualit	y Control	
SIAS File Conditional SiAP Conditional Conditional App Case App Case <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>																					
NICAS Buillinge Ebectricy Megrount Bros. 18.954.20 18.154.20	PSO	Site #		Calegory	Subrategory	Usage Unit	75	QTR	Usage Amount	8 TUS 1026	Cost (1,000 S)	Additional Information			Anthropoger MICO ₂ e		7		Cost % Change		5/Unit
DAS. Publique Electricity Ascipante Integration Septencing 411720.21 45172.21 45172.21 45172.21 45172.21 45172.21 45172.21 45172.21 45172.21 45172.21 45172.21 45172.21 45172.21 45172.21 45172.21 45172.21 45172.21 45172.41 41772.21 45172.41 41772.21 45172.41 41772.42 41772.42 <				Buildings	Electricity	Megawaff Hour	2003	1	10,297,704	137,495,766	\$1,513,405		83415	2	16,583,577	0.000	1,092,377			\$0.03	
TNA-8 Buildings Electricity Mageous Hine, 2007 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1			u	Buildings	Electricity	Медамян Ноиг	2004	1	12,720,480	145,762.278	\$1,722,012		83415	2	17.580.614	0.000	1,158,053		12,11%	\$0.04	6.83%
NAS. Buildings Electricity Megeount Hora 147,052,10 1,47,052,10 1,47,052,10 1,47,052,10 1,47,052,11 1,47,052,11 1,47,052,11 1,47,052,11 1,47,052,11 1,47,052,11 1,47,052,11 1,47,052,11 1,47,052,11 1,47,052,11 1,47,052,11 1,47,052,12 1				Buildings	Electricity	Megawatt Hour	2002	1	38,566,250	131,588.045	\$1,696,964		83415	63	15,871.038	0.000	1,045,441		-1.48%	\$0.03	8.39%
DLA-3 Buildings Destrictive Magnowill Flore 11,21,24 1,17,14,24 2,17,74,33 0.00 1,11,14 2,65% 3,62,74 3,02,24 3,02,74 3,02 1,11,24	ľ	Ь		Buildings	Electricity	Megawatt Hour	2006	T	14,299,080	185,268,461	\$2,483,429		83415	2	22,345,516	0.000		-8	31.67%	\$0.05	3.79%
PUA-5 Bellulings Exercicy Megeount Iron 2006 1,142,547 0,000 1,143,547 1,000-10 1,000-10 1,000-10 1,000-10 1,000-10 1,000-10 1,000-10 1,000-10 1,000-10 1,000-10 1,142,547	ľ	F		Buildings	Electricity	Megawatt Hour	2007	1	13,203,290	147,409.625	\$961,022		83415	61	17,779,303	0.000	1,171,140		-158.42%	20.02	-105.61%
DRAS Ballidias Electricity Mageowa Hora 14112690 2 14112690 2 14112690 2 14112690 3<				Buildings	Electricity	Megawatt Hour	2008			148,938.550	\$1,215,281		83415	**	17,963,709	0.000	1,183,287		20.92%	\$0.03	20.10%
DL3.8 Buildings Electricity Megeword Hora 2010 1 4 124 2.04 8 1500 6.88 8 2415 2 1 528-121 0.00 1,174 0.03 4 44% 23 65% 8 10 0 DL3.8 Buildings Electricity Megword Hora 2011 1 4 124 6.04 1 6 0.00 1,112 0.71 1 5 0.00 1 5		1		Buildings	Electricity	Megawatt Hour	2009	1	11,389.002	141,219,275	\$1,455.289		83415	62	17,032,675	0.000	1,121,959		16,49%	\$0.04	20.82%
PULS Buildings Electricity Mageount Hont 2011 1 41,224,29 15,556,384 85115 2 16,685,000 0,000 1,112,077 51,575 81,00 PGLS Buildings Electricity Mageount Hont 200 2 4,1024,433 15,204,433 8,114,00 8,411 2 16,085,066 0.000 1,112,077 13,586 8,100 1,112,077 13,586 8,100 1,112,077 <td< td=""><td></td><td></td><td></td><td>Buildings</td><td>Electricity</td><td>Megawatt Hour</td><td>2010</td><td>. 1</td><td>13,312,197</td><td>147,781,216</td><td>\$1,906,187</td><td></td><td>83415</td><td>2</td><td>17,824,121</td><td>0.000</td><td>1,174.093</td><td></td><td>23,659,</td><td>\$0.04</td><td>20.1196</td></td<>				Buildings	Electricity	Megawatt Hour	2010	. 1	13,312,197	147,781,216	\$1,906,187		83415	2	17,824,121	0.000	1,174.093		23,659,	\$0.04	20.1196
PALSA Buildings Electricity Megaword Hoar 200 1,12,207 2,00,40,400 1,50,40,400 1,12,107 3,50,40 3,50,40 1,12,107 3,50,40 3,50,40 1,12,107 3,50,40 3,50,40 1,12,107 3,50,40 3,50		n		Buildings	Electricity	Megawatt Hour	POLICE.		(1,240,704	140,713.282	\$1,539,387		83415	2	16,065,009	0.000			-23.83%	\$0.03	+17,91%
DNL-S. Buildings Ebetricity Magnount Hour 2004 3 26, 94 0 15.45.2.10 15.25.2.43 8.20.2.43 8.41.13 2 20.43.9.96 0.00 1,345.810 17.3% 23.25.9% 8.0.04 DNL-S. Buildings Ebetricity Magnount Hour 2006 2 5.45.77.106 19.20.10.25 2.3.47.00 0.00 1,325.43 1.75% 2.3.53.9% 8.0.04 DNL-S. Buildings Ebetricity Magnount Hour 2006 2 2,467.206 19.20.000 8.414 2 2 2.147.005 0.00 1,325.407 2.0.99 8.00 1,325.407 2.0.99 8.00 1,326.41 2 2,477.00 2.00 1,326.41 2 2,477.00 2.00 1,326.41 2 2,477.00 8.00 1,326.41 3 2,477.00 8.00 1,326.42 1,328.42 1,326.42 1,328.42 1,328.42 1,328.42 1,328.42 1,328.42 1,328.42 1,328.42 1,328.42 1,328.42 1,328.42 1,328.42 1,328.42 1,328.42 1,328.42<	-6			Buildings	Electricity	Megawall Hour	2003	2	11,024,438	139,975,382	\$1,540.698		83415	7	16,882,648	0.000	1,112,077		- Land	\$0.04	
DALS Buildings Electricity Magewant Hoar 2004 1,58,83,14 2,51,200 15,83,246 5,20,11,355 8,91,13 2 13,128,057 3,70% 9,004 1,228,401 3,004 9,004 1,228,401 3,004 9,004 1,225,403 1,004				Buildings	Electricity	Megawatt Hour	2004		19,646.840	169,395.018	\$2,022,423		83415	**	20,430,996	0.000	1,345.810		23.82%	\$0.04	7.81%
Nil-S Buildings Electricity Megawont Hoar 2006 2,2,630,02 83413 2 2,147,902 0.000 1,235,434 18.4% 23.5% 80.005 DNL-S Buildings Electricity Megawont Hoar 200 2 46,182,710 192,044,700 83413 2 19,266,874 0.000 1,235,193 82,4% 23.09 50.00 DNL-S Buildings Electricity Megawont Hoar 200 2 46,186,259 11,736,693 83413 2 19,266,874 0.000 1,232,002 20,196 80.00 DNL-S Buildings Electricity Megawont Hoar 201 2 44,729,895 11,76,477 83413 2 19,06,874 0.000 1,121,89 22.0% 80.00 DNL-S Buildings Electricity Megawont Hoar 2001 3,41,75,80 11,400,73 83413 2 14,434,87 0.000 1,11,89 1,14,9% 80.00 DNL-S Buildings Electricity Megawont H				Buildings	Electricity	Megawatt Hour	2002			155,833,546	\$2,011.355		83415	2	18,795,325	0.000	1,238,067		-0.5506	\$0.04	7.50%
DKL-S Buildings Electricity Megawant Hour 2107. 18.9 ft. 4.0 8.415. 2 19.57.087 0.00 1.250.142 2.201796. 451.75% 8.00 80.00 1.250.142 2.00 2.11.75% 8.00 80.00 1.250.00 1.250.00 451.75% 8.00 80.00 1.250.00 1.250.00 1.250.00 451.75% 8.00 80.00 1.250.00 1.250.00 1.250.00 1.250.00 4.125% 8.00 80.00 1.250.00 1.250.00 1.250.00 90.00 1.250.00 1.250.00 90.00 1.250.00 1.250.00 90.00 1.250.00 1.250.00 90.00 1.250.00 1.250.00 90.00 1.250.00 1.250.00 90.00 1.250.00 1.250.00 90.00 1.250.00 1.250.00 90.00 1.250.00 1.250.00 90.00 1.250.00 1.250.00 90.00 1.250.00 1.250.00 90.00 1.250.00 1.250.00 90.00 1.250.00 1.250.00 90.00 1.250.00 90.00 1.250.00 90.00 1.250.00 90.00 90.00 90.00 90.00 90.00 90.00	-77			Buildings	Electricity	Megawatt Hour	2006	125	56,273,160	192,004.022	\$2,630,092		83415	2	23.157.902	0,000	1,525,434		23.53%	\$0.05	5.77%
NUL-S Buildings Electricity Megawatt Hoar 200 3 51,405,605 83413 2 20,905,606 0,000 1,323,602 1,02,005,304 8,003 1,224,02 1,047% 1,123,603 3,044 8,003 NUL-S Buildings Electricity Megawatt Hoar 200 2 44,135,905 31,754,743 2 19,006,874 0,000 1,22,502 10,47% 1,479,909 30,044 NuL-S Buildings Electricity Megawatt Hoar 200 3,175,475 0,000 1,425,415 0,000 1,123,60 30,044 NuL-S Buildings Electricity Megawatt Hoar 200 3,473,050 115,011,64 31,105,37 2 14,434,157 0,000 1,135,40 3,044 3,044 NuL-S Buildings Electricity Megawatt Hoar 200 3,414,105,340 13,405,274 3,141,357 0,000 1,432,452 3,599 3,141,652 3,141,405 3,414,105 3,414,105 3,414,105 3,414,105 3,444,10	-	7		Buildings	Electricity	Megawall Hour	2007	2		159,744,961	\$1,044,709		83415	-1	19,267,087	0.000	1,269.142		-151.75%	20.02	-109.46%
NI-S Buildings Electricity Megawatt Hour 200 4,5186.259 15,7887.516 31,703.693 83415 2 19,006.874 0,000 1,222.002 -10,47% 1,129% 50,04 INI-S Buildings Electricity Megawatt Hour 200 2 4,735.055 1,176.477 83415 2 18,405.077 0,000 1,212.59 35.04 50.04 INI-S Buildings Electricity Megawatt Hour 200 3,473.05 11,501.52 1,116.27 0,000 1,125.49 35.04 30.04 INI-S Buildings Electricity Megawatt Hour 200 3 4,715.02 1,15,000 84115 2 14,354.157 0,000 1,127.92 35.0% 30.04 INI-S Buildings Electricity Megawatt Hour 200 3 9,541.230 13,109.50 82,116.52 84115 2 14,354.57 0.000 1,037.92 1,149.93 1,116.52 1,111.54 1,111.54 1,111.54 1,111.54				Buildings	Electricity	Megawatt Hour	2008			174,087.525	\$1,460.263		83415	21	20,996.966	0.000			28,46%	\$0.03	22.03%
NL-S Buildings Electricity Magnount Hour 201 2 44,723,905 15,287,954 15,986,002 83415 2 18,405,077 6,000 1,212,56 3,27% 13,96% 80.04 INL-S Buildings Electricity Magnount Hour 200 2 4,742,902 11,764,77 83415 2 14,581,586 0.000 1,212,56 5.80% 11,169 8.00 INL-S Buildings Electricity Magnount Hour 200 3 34,105,359 8,1,16,377 84115 2 14,535,589 0.000 1,056,100 80,00 10,05 30,04 INL-S Buildings Electricity Magnount Hour 200 3 34,105,330 8,116,57 8,411,63 1,52,57 4,411,43 2 1,413,45 0,000 1,05 3,00 3,410,53 1,416,57 3,411,63 3,411,63 3,411,63 3,411,63 3,411,63 3,411,63 3,411,63 3,411,63 3,411,63 3,411,63 3,411,63 3,411,63				Buildings	Electricity	Megawatt Hour	2009		16,186,259	157,587,516	\$1,703,693		83415	41	19,006.874	0.000	1,252,002		14,29%	\$0.04	22.41%
Dil-S Baildings Electricity Magnovati Hour 2011 2 47,479,922 51,776,477 38,413 2 18,495,126 0.000 1,218,239 58,098 -1,146% 80.04 INL-S Baildings Electricity Magnovati Hour 2005 3,9,180,255 1,15,037 8,4115,37 0.000 1,605,400		H		Buildings	Electricity	Megawalt Hour	2010	61	14,723.905	152,597,964	\$1,980,092		83415	2	18,405.077	0.000	1,212,361		13.96%	\$0.04	16.68%
INL-S Baildings Electricity Megawarit Hour 2003 3,380,265 11,901,1464 \$1,309,260 83415 2 14,354,57 0,000 91,523 2,360,40 \$10,001 INL-S Buildings Electricity Megawarit Hour 2004 3,345,630 8,4115 2 16,18,580 0,000 1,005,40 1,356,60 8,004 INL-S Buildings Electricity Megawarit Hour 2007 3,4109,230 135,457,47 8,4115 2 14,121,167 0,000 1,037,90 1,356,61% 8,004 INL-S Buildings Electricity Megawarit Hour 2007 3,4109,230 13,138,833 83415 2 14,121,167 0,000 1,037,90 1,366,1% 8,004 INL-S Buildings Electricity Megawarit Hour 2007 3,440,23 1,138,833 83415 2 14,121,167 0,000 99,886 3,004 1,137,90 1,137,00 12,146,226 11,138,833 8,4115 2 14,121,167 0,000				Buildings	Electricity	Megawatt Hour	2011		17,479,092	161,998.662	\$1,776,477		83415	23	18,495,126	0.000	1,218.292	H	-11.46%	\$0.03	-18.33%
NUL-S Buildings Electricity Magenwatt Hour 2004 3 43,335,870 13,116,327 84113 2 6,186,580 0,000 1,006,100 11,32% 23,69% 8,004 INL-S Buildings Electricity Magenwatt Hour 2006 3 44,109,340 155,273,42 \$1,465,07 84113 2 16,318,585 0,000 1,073% 10,25% 8,005 INL-S Buildings Electricity Magenwatt Hour 2006 3 4,400,340 138,706,41 83413 2 14,32137 0,000 1,073% 15,056,98 8,005 INL-S Buildings Electricity Magenwatt Hour 2007 3 4,706,50 118,706,41 8,4113 2 14,123.56 0,000 1,075% 11,256,61% 8,003 INL-S Buildings Electricity Magenwatt Hour 2007 3 4,766,269 81,138,634 8,4113 2 14,143,560 90,680 3,676,98 8,003 INL-S Buildings Electricity Magenwatt Hour 2010 <td></td> <td>H</td> <td>D</td> <td>Buildings</td> <td>Electricity</td> <td>Megawait Hour</td> <td>2003</td> <td>Ä</td> <td>14,880,265</td> <td>119,011.464</td> <td>\$1,309,950</td> <td></td> <td>83415</td> <td>1</td> <td>14,354,157</td> <td>0.000</td> <td>945.523</td> <td></td> <td></td> <td>\$0.04</td> <td></td>		H	D	Buildings	Electricity	Megawait Hour	2003	Ä	14,880,265	119,011.464	\$1,309,950		83415	1	14,354,157	0.000	945.523			\$0.04	
INI-S Buildings Electricity Magnovat Hoar 2005 3 9,641,630 18,413,54 2 (8,313,88) 6,000 1,07,439 0,739 8,009 <td></td> <td></td> <td></td> <td>Buildings</td> <td>Electricity</td> <td>Megawan Hour</td> <td>2004</td> <td></td> <td></td> <td>134,195,939</td> <td>\$1,716,527</td> <td></td> <td>83413</td> <td>er</td> <td>16,185,580</td> <td>0.000</td> <td>1,066,160</td> <td>12</td> <td>23,699n</td> <td>\$0.04</td> <td>13,95%</td>				Buildings	Electricity	Megawan Hour	2004			134,195,939	\$1,716,527		83413	er	16,185,580	0.000	1,066,160	12	23,699n	\$0.04	13,95%
RNL-S Buildings Electricity Megawart Hour 2007 3 44,109,240 15,26,628 82,144,169 85415 2 14,2157 6,000 1,195,781 10,13% 12,29% 80.05 INL-S Buildings Electricity Megawart Hour 2007 3 34,720,60 125,465,29 11,378,833 83,113 2 14,121,268 0,000 94,333 -5,57% -5,65% 8,033 INL-S Buildings Electricity Megawart Hour 2007 3 34,720,60 115,721,36 8,1415 2 14,143,60 90,680 3,40% 3,60% 5,043 INL-S Buildings Electricity Megawart Hour 200 3 4,372,60 11,722,61 8,1415 2 14,143,60 90,00 99,395 3,47% 5,044 INL-S Buildings Electricity Megawart Hour 201 3 4,375,62 11,245,237 8,414,35 0,000 99,373 4,75% 5,044 INL-S Buildings Electricity Megawart Hour				Buildings	Electricity	Megawall Hour	2005	2		135,257,242	\$1,867,073		83415	2	16,313,585	0,000	1,074.592		8.06%	\$0.05	7.34%
INL-S Buildings Electricity Megawart Hour 2007 3 4,800,350 118,70,681 5835,574 63413 2 14,321,317 0,000 94,373 -3,56,1% 50,02 INL-S Buildings Electricity Megawart Hour 2009 3 5,772,660 125,465,247 8,3115 2 14,123,61 0,000 99,885 5,565,1% 50,03 INL-S Buildings Electricity Megawart Hour 2009 3 4,377,045 11,472,204 8,3415 2 14,143,63 0,000 99,885 5,565,1% 5,004 INL-S Buildings Electricity Megawart Hour 2011 3 4,413,124 11,143,204 8,3415 2 14,143,67 0,000 99,885 5,049 5,049 INL-S Buildings Electricity Megawart Hour 2011 3,443,765 11,155,624 8,3415 2 14,143,67 0,000 95,396 4,76% 6,57% 5,044 INL-S Buildings Electricity Megawart Hour 2	1		0.	Buildings	Electricity	Megawatt Hour	2006		14,109,340	150,501,068	\$2,144,169		83415	2	18,152,167	0:000	1,195,781	2	12,92%	\$0.05	3.11%
NIA-S Buildings Electricity Megawant Hour 200 3 A,772,060 125.466,269 \$1,138.833 83415 2 15,132,681 0.000 996,805 5,36% s. 56,63% s. 50.03 INL-S Buildings Electricity Megawant Hour 2010 3 3,572,146 51,236,638 83415 2 13,973,535 0.000 919,385 8,24% s. 76,63% s. 8,044 INL-S Buildings Electricity Megawant Hour 2011 3 5,433,645 11,256,247 8,3415 2 14,143,657 0,000 91,385 3,044 INL-S Buildings Electricity Megawant Hour 2011 3 5,433,65 11,556,536 8,1,135,070 83415 2 14,143,67 0,000 952,944 5,044 INL-S Buildings Electricity Megawant Hour 200 3,135,070 83415 2 14,178,070 9,000 973,964 3,66% 3,044				Buildings	Electricity	Megawatt Hour	2007	3.		118,740,841	\$835,574		83/15	2	14,321.517	0.000	943.373		-156.61%	\$6.02	-102.46%
INL-8 Buildings Electricity Mogewent Hour 2007 3 33.916.045 113.721.346 81.326.233 83.413 2 13.957.355 0,000 919.385 84.27% 11.15% 50.044 INL-8 Buildings Electricity Mogewent Hour 2010 3 43.73.756 11.73.75.16 87.13.67 87.113 2 14.14.350 0.000 92.01 47.67% 50.04 INL-8 Buildings Electricity Mogewent Hour 2011 3 43.435.63 110.556.236 8.1735.630 83.415 2 14.178.67 0.000 92.04 4.57% 50.04 INL-8 Buildings Electricity Mogewent Hour 2004 3.415.56.29 81.735.629 81.175.620 <				Buildings	Electricity	Megawatt Hour	2008			125,466,269	\$1,138,853		83415	2	15,132,681	0.000	596,805		26.63%	\$0,03	22.47%
INL-S Buildings Electricity Megawant Hoar 2010 3 34,370.462 117,272.016 \$1,436.247 \$34,15 2 14,144.360 0.000 931.703 1.32% 7.63% \$0.04 INL-S Buildings Electricity Megawant Hoar 2011 3 36,885.857 113,156.206 \$1,116.070 83415 2 14,144.360 926.016 4,76% 4,55% \$0.04 INL-S Buildings Electricity Megawant Hoar 2001 32,433.765 110,664.006 \$1,116.070 83415 2 13,347.357 0.000 873.964 3,69% 50.04 INL-S Buildings Electricity Megawant Hoar 2004 34,453.656 \$1,725.629 83415 2 14,178.076 0.000 933.964 3,86% 29,41% 80.05			Ш	Buildings	Electricity	Megawatt Hour	2009			115,721.546	\$1,326,628		83415	2	13,957,355	0,000	585.616		14,15%	\$0.03	20.82%
INL-S Buildings Electricity Megawat Hoar 2011 3 36,889,587 123,134,136 81,134,124 83415 2 14,058,028 0,000 926,016 4,76% 6,59% 30,04 INL-S Buildings Electricity Megawat Hoar 2001 3,4,453,626 81,125,620 83415 2 13,347,357 0,000 873,964 3,86% 29,41% 80.04 INL-S Buildings Electricity Megawat Hoar 2004 3,4,53,563 81,725,620 83415 2 14,178,676 0,000 933,964 3,86% 29,41% 80.05			Ш	Buildings	Electricity	Megawatt Hour	2010	3.	Ī	117,272,016	\$1,436.247		83415	2	14,144,360	0.000	931.703		7.63%	\$0.04	6.39%
INL-S Buildings Electricity Megawart Hoar 2003 4 32,433.765 110,564.006 \$1,218.070 8341.5 2 13,347.357 0,000 879.204 80.000				Buildings	Electricity	Megawatt Hour	2011			123,134,156	\$1,343,124		83415	1	14,058.028	0.000			-6,93%s	50.04	-12,28%
DuL-8 Buildings Electricity Megawant Horr 2004 4 34,453,859 117,556,536 \$1,725,620 83415 2 14,178,676 0,000 933,964 5,869% 29,41% \$0.05	NE			Buildings	Electricity	Megawall Hour	2003			110,664.006	\$1,218,970		83415	r.i	13,347,357	0.000	879.204			\$0.04	
				Buildings	Electricity	Megawaft Hour	2004	+		117,556.536	\$1,725,620		83415	**	14,178,676	0,000	Ì		29,41%	\$0.05	25.02%

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A. S. M. Anneles (Marchaeles) Astronomy (Marc	Cutegory	Cohootistoore	***************************************					Control of the Contro	The same of the sa			Anthropage	200	100	A.D. Ilyan			U.A.
Dist Simulation Elementory Meganal Place Distriction 1 March 200		Constyne onne	rivage tinit					Cost (1,800 S)	Additional Information			MICO			Opt % Change		Cost S/	S/Unit % Change
Dis. S. Buildings Electricity Magnowal Broad 2007 4 25,07,25 15,25,25 8445.3 8445.3 21,17,249 60,00 96,00	Buildings	Electricity	Megawatt Hour		38,4			12,015.358		83415	2	15,821,556	0.000	1,042.182	10.38%	14.38%	% \$0.05	4.46%
Dick of blunkinger Effectively Mageowal Bross 5004 4 23,217.07 11,257.23 514.25 51,429.34 600.00 67,620 Dick of blunkinger Effectively Mageowal Bross 500.4 32,317.07 11,257.23 61.13 2 13,415.93 0.00 67,529 Dick of blunkinger Effectively Mageowal Bross 200.4 4,317.23 11,457.24 61.04 5,141.2 1,217.22 10.00 87.73 Dick of blunkinger Effectively Mageowal Bross 200.1 4,317.23 11,457.43 1,417.24 1	Buildings	Electricity	Megawatt Hour		36,8			845,342		83415	2	15,176,340	0.000	189.666	4.25%	-138.41%	11% \$0.02	-128.68%
DAG 5. Buildings Televiring Magnoral Hane 2009 1 3.13.00 73 10.18.26 kg. 58.11.2 kg. 2.13.11.685 gg. 10.00 gg. 10.0	Buildings	Electricity	Megawait Hour	V.	32,71			3945.518		83415	2	13,459,945	0.000	886.620	-12.75%		96 \$0.03	20,71%
NA. 5. Inulingaçe Therracy or Magnoral Intra. Magnoral Intra. 10.17.2.57 10.5.7.2007 3.15.1.200 3.15.1.201 10.000 437.1.200 NA. 5. Inulingaçe Electricop Magnoral Intra. 20.11.2.20 10.11.2.20 10.000 50.92.3.4 NA. 5. Inulingaçe Electricop Magnoral Intra. 10.000 callona 20.000 10.000 50.92.3.4 NA. 5. Inulingaçe Fielo Id Lobo Callona 20.001 10.000 50.92.3.4 10.000 50.92.3. NA. 5. Inulingaç Fielo Id Lobo Callona 20.001 10.000 50.92.4 10.000 50.92.4 10.000 10.000 NA. 5. Inulingaç Fielo Id Lobo Callona 20.001 11.000 Callona 20.001 11.000 Callona 20.001 10.000 20.000 10.000	Buildings	Electricity	Megawait Hour		32,3			41,158,826		83/115	2	13,311,695	0.000	876.855	-111%			19.31%
NAS Buildings Electricity Magnosti Ileas 1811 4 31/17/215 100/24/24 81413 2 2 14/17/21 0.000 87743 NAS Buildings Find cling Hord cling 140/04/26 100/04/24 84143 2 2 14/17/21 0.000 87743 NAS Buildings Find cling 140/04/26 150/04/26 84141 1 1 6.000 87743 NAS Buildings Find clin 140/04/26 150/04/26 84141 1 1 6.000 0.000 0.000 NAS Buildings Find clin 1,000 callina 200 1 545.00 5717.04 8717.04 87141 1 1 7.000 callina 200 1 545.00 5717.04 8717.04 8717.04 8717.04 8717.04 8717.04 8717.04 8717.04 9717.04	Buildings	Electricity	Megawait Hour		31.23			1,356.369		83415	2	12,872,871	0.000	847.949	-3.41%	14.18%	96 \$0.04	17,01%
NAS Building Flextendry Mage of a part of	Buildings	Electricity	Megawnii Hour		30,1			11,092,744		83415	ы	12,417,921	0.000	817.981	-3.66%	-23.58%	10.03 %8	-19.21%
NAS. Buildinger Find 100 Libro Gallone 2014 120 874 120	Buildings	Electricity	Megawall Hour	244	31.10		l,	11,066,893		83415	7	12,141,227	0.000	799.755	3.18%	-2.42%		-5.79%u
TNA-Se pathlege Felat Old 1,000 callone 200.11 co. 56.07.11 co. 60.00	Buildings	FaelOil	1,000 Gallons	2003 I	974.			3941.863		83415	1	9,976,423	0,000	0.000			\$0.97	
Th.2.5. Ballelige Fled Oil 1000 Calleline 2007 C 157,272.00 8717.294 89.115 1 5.500.254 6.000 6.000 6.000 DN.2.5. Ballelige Fled Oil 1,000 Calleline 2006 11.73.758 11.73.758 15.561.638 89.115 1 5.700.254 6.000 6.000 DN.2.5. Ballelige Fled Oil 1,000 Calleline 2006 1 55.254.75 15.564.688 89.115 1 5.700.254 6.000 6.000 6.000 DN.2.5. Ballelige Fled Oil 1,000 Calleline 2006 1 59.20.75 85.253.57 5.554.57 5.554.57 6.000 6.000 6.000 6.000 DN.2.5. Ballelige Fled Oil 1,000 Callene 2007 1 57.254.75 5.554.57 5.554.57 5.554.57 6.000 6.000 6.000 6.000 DN.2.5. Ballelige Fled Oil 1,000 Callene 2007 1 1.754.75 5.554.57 5.541.57 5.541.57 5.541.57 6.000 6.000 6.00	Buildings	Firel Oil	1,000 Gallons	2004	652.3			647,671		83415	1	6,680,531	0,000	0,000	-19,34%	-15,89%	99° \$0.99	3.31%
DL-S. Bindlage Field oil LobG callone 2006 1, 898 200 11, 17, 15, 15 11, 17, 15, 15 11, 17, 15, 15 11, 17, 15, 15 11, 17, 15, 15 11, 17, 15, 15 11, 17, 15, 15 11, 17, 15, 15 11, 17, 15, 15 11, 17, 15, 15 11, 17, 15, 15 11, 17, 15, 15 11, 17, 17, 17, 17, 17, 17, 17, 17, 17,	Buildings	Fire Oil	1,000 Gallons	2005	545.			173.394		83415	1	5,581,464	0.000	00000	-19.69ª	16.26%	96 \$1,42	30.03%
DL-S. Subdiage Fine I oil Lob Cadlane 2007 1 75 181 10.65-678 VP 81.645-688 81.415 1 7.198-680 0.000 0.000 DL-S. Buildings Fine I oil 1,000 Cadlane 2007 1 70,120 82.604.45 1.504.668 83.415 1 7.186.681 0.000 0.000 DL-S. Buildings Fine I oil 1,000 Cadlane 2007 1 5.29.718 82.604.45 1.600 0.000 0.000 0.000 DL-S. Buildings Fine I oil 1,000 Cadlane 2007 2 1.207.18 1.11.748.94 81.11.749 85.41.74 1 0.000 Cadlane 0.000 0.000 0.000 DL-S. Buildings Fine I oil 1,000 Cadlane 2007 2 1.11.748.94 81.11.749 85.11.74 81.11.749 85.41.749 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 <td< td=""><td>Buildings</td><td>FireLOil</td><td>1,000 Gallons</td><td>2005</td><td>849.6</td><td></td><td></td><td>1,751,031</td><td></td><td>83415</td><td>+</td><td>8,700.824</td><td>0.000</td><td>0.000</td><td>35.85%</td><td>55.83%</td><td>90 \$2.06</td><td>31.15%</td></td<>	Buildings	FireLOil	1,000 Gallons	2005	849.6			1,751,031		83415	+	8,700.824	0.000	0.000	35.85%	55.83%	90 \$2.06	31.15%
DL-S. Paintings Pet Old Lobo Callone 2008 1 71,25 51,95,648 8341.5 1 7,146,091 0,000 DL-S. Buildings Pet Old 1,000 Callone 2009 1 95,971 8,246,254 5,11,114 8,411 1 6,154,247 0,000 DL-S. Buildings Fet Old 1,000 Callone 2010 1 4,513,271 8,125,437 8,411 1 6,154,447 0,000 DL-S. Buildings Fet Old 1,000 Callone 2010 1 4,513,471 8,113,479 8,411 1 1,515,414 0,000 DL-S. Buildings Fet Old 1,000 Callone 2001 2 8,111,479	Buildings	Fuel Oil	1,000 Gallons	Z007 I	775.			1,634,985		83415	1	7,938,506	0.000	0,000	-9.60%	+7,10%	% S2.11	2.29%
PALSA Buildings Fled Oil 1,000 Callions 2009 1 55,000 S 51,000 Callions 500 Oil 51,500 Ca	Buildings	Fire Oil	1,000 Gallons	2008 1	701.			1,956,088		83415	1	7,186,081	0.000	0,000	-10.47%	16,4296	96 \$2.79	24.34%
PMLSS Bublidages Fact Old 1,000 Callons 2010 1,619,71 8,848,330 8,138,883 1 6,114,931 8,114,88 1 6,514,51 6,000 0,000 PLIAS Bublidages Fact Old 1,000 Callons 2001 1,014,51 8,114 1 4,546,622 6,000 0,000 PLIAS Bublidages Fact Old 1,000 Callons 2001 1,011,11 1,95,314,16 8,101,19 0,000 0,000 0,000 PLIAS Bublidage Fact Old 1,000 Callons 2007 1,011,11 1,95,314,16 8,101,19 0,000 0,00	Buildings	Fiel Oil	1,000 Gallons	2009 1	599.			11.211.714		83415	1	6,136,384	0.000	0.000	-171196	-61.43%	396 \$2.02	-37.8596
Pill Signating signatin	Buildings	Fuel Oil	1,000 Gallons		643.5			1,368,915		83415	1	6,594,457	0,000	0,000	6.95%	11.48%	96 \$2,13	4,88%
NIL-S Buildings Fiel Oil Lu00 Gallone 2005 2 1,592,31-16 51,007.904 8341.5 1 10,334,689 0.000 0.000 NIL-S Buildings Fiel Oil 1,000 Gallone 2007 2 1,171,786 1,181,719.60 8341.5 1 10,234,689 0.000 0.000 NIL-S Buildings Fiel Oil 1,000 Gallone 2007 2 1,274,366 2,2,077.76 8341.5 1 1,1831,166 0.000 0.000 NIL-S Buildings Fiel Oil 1,000 Gallone 2008 2 1,24,068.91 2,2,077.76 8341.5 1 1,1831,166 0.000 0.000 NIL-S Buildings Fiel Oil 1,000 Gallone 2008 2 1,24,468 1,24,47,47 8441.87 1 1,1831,66 0.000 0.000 NIL-S Buildings Fiel Oil 1,000 Gallone 2007 2 1,24,468 1,24,474 8,44,418 1,14,44,47 1,44,44,44 1,44,44,44 1,44,44	Buildings	Fuel Oil	1,000 Gallons		443,3			1,198.824		83415	1	4,546,022	0000	00000	-45,06%	-14,19%	996 \$2,70	21,28%
DNL-SS Pundings Fiel Oil 1,000 Callons 2004 2 1,11117 153,534,146 8,1415 1 1,033,166 0,000 0,000 DNL-SS Bundings Fiel Oil 1,000 Callons 2006 2 1,21,173,664 81,125,176 83415 1 1,033,166 0,000 0,000 DNL-SS Bundings Fiel Oil 1,000 Callons 2007 2 82,576 83415 1 1,033,166 0,000 0,000 DNL-SS Bundings Fiel Oil 1,000 Callons 2007 2 25,276 1,235,650 83415 1 8,435,82 0,000 0,000 DNL-SS Bundings Fiel Oil 1,000 Callons 2007 2 73,432 3,435,82 83415 1 8,435,83 0,000 0,000 DNL-SS Bundings Fiel Oil 1,000 Callons 2007 2 73,432 8,545,82 8,4415 1 3,431,42 1 3,431,42 1 1,411,42 1,411,42	Buildings	Fitel Oil	1,000 Gallons	ca:	1,035			11,007.960		83415	-	10,642,641	0.000	0.000			50.97	
Nil-Se Buildings Fiel Oil L000 Callons 2002 2 58.2 12% 121.719 864 51.22776 85.415 1 9.032.709 0.000 0.000 Nil-Se Buildings Fiel Oil 1,000 Callons 2007 2 21.77.456 14.65.67.756 82.451.75 1 11.63.316 0.000 0.000 0.000 Nil-Se Buildings Fiel Oil 1,000 Callons 2007 2 21.67.456.81 82.451.75 1 9.05.314 0.000 0.000 Nil-Se Buildings Fiel Oil 1,000 Callons 2007 2 21.66.81 82.57.072 82.45.62 82.415 1 9.06.31 0.000	Buildings	Firefoil	1,000 Gallons		101			1,051,909		83415	1	10,354,689	0.000	0.000	-2.78%	4.18%	6 51.04	6.77%
NL-S Banidings Fact Oil 1,000 Gallons 2006 2,1,071,369 148,676,522 \$2,067,376 \$8415 1 11,083,166 0,000 0,000 NLI-S Banidings Fact Oil 1,000 Gallons 2007 2 25,536 13,566,134 1 1,466,510 0,000 NLI-S Banidings Fact Oil 1,000 Gallons 2007 2 754,406,810 \$1,640,610 84115 1 8,451,87 0,000 NLI-S Banidings Fact Oil 1,000 Gallons 2010 2 754,542 \$1,555,622 84115 1 8,451,87 0 0,000 0	Buildings	PelOil	1,000 Gallons	32	882.0			1,223,776		83415	1	9,032,709	0.000	0,000	-14.64%	14,04%	96 \$1,39	25,02%
NL-S Buildings Fiel Oith 1,000 Callones 2007 2 823,208 115,878,70 th 81,640 156 83415 1 8,450,825 0,000 0,000 NL-S Buildings Fiel Oil 1,000 Callones 2008 2 756,994 10,230,5602 83415 1 8,4518,90 0,000 0,000 NL-S Buildings Fiel Oil 1,000 Callones 2007 2 756,994 10,230,5602 83415 1 8,4518,90 0,000 0,000 NL-S Buildings Fiel Oil 1,000 Callones 2007 2 756,945 71,13,296 81,415 1 7,517,597 0,000 0,000 NL-S Buildings Fiel Oil 1,000 Callones 2004 3 24,845 55,400 81,600 83415 1 7,517,597 0,000 0,000 NL-S Buildings Fiel Oil 1,000 Callones 2004 3 24,927,20 41,455,20 83415 1 7,437,30 0,000 0,	Buildings	Fuel Oil	1,000 Gallons		1,07		1	12,067.576		83415	1	11,033,166	0.000	0.000	18.13%	40.81%	96 \$1.92	27,709n
Polt-5 Buildings Fiel Oil 1,000 Gallone 2008 2 908,745 125,406,810 \$2,570,792 83415 1 9,306,314 0,000 0,000 IDL-5 Buildings Fiel Oil 1,000 Gallone 2010 2 734,068 1,515,569 83415 1 5,151,890 0,000 IDL-5 Buildings Fiel Oil 1,000 Gallone 2010 2 734,680 1,013,830,49 83415 1 7,517,29 0,000 IDL-5 Buildings Fiel Oil 1,000 Gallone 2001 2 734,680 876,638 83415 1 7,517,297 0,000 IDL-5 Buildings Fiel Oil 1,000 Gallone 2004 3 519,677 71,113,426 \$504,038 83415 1 5,312,830 0,000 0,000 IDL-5 Buildings Fiel Oil 1,000 Gallone 2004 3 51,627 7,41,340 \$504,038 84415 1 5,312,830 0,000 0,000 IDL-5<	Buildings	Fuel Oil	1,000 Gallons		825.			11,640,156		83415	-	8,450,825	0.000	0,000	-30.56%	-26.06%	696 \$1.99	3.44%
PAL-S Baildings Find Crit 1,000 Calibras 2,099 2,76,994 109,985,172 51,239,689 83415 1 8,161,890 0,000 0,000 PAL-S Baildings Find Crit 1,000 Calibras 2001 2 74,4690 16,334,754 8,145,548 83415 1 5,114,890 0,000 0,000 RAL-S Buildings Find Crit 1,000 Calibras 2001 2 74,4690 16,334,734 1,535,218 83415 1 5,313,42 0,000 0,000 RAL-S Buildings Find Crit 1,000 Calibras 2004 3 35,490 4,753,40 8561,037 83415 1 3,735,76 0,000 0,000 RAL-S Buildings Find Crit 1,000 Calibras 2007 3 354,290 4,600 83415 1 3,735,76 0,000 0,000 RAL-S Buildings Find Crit 1,000 Calibras 2007 3 354,290 3,600 83415 1 3,143,70	Buildings	Fuel Oil	1,000 Gallons		.806			12,570,792		83415	-	9,306,314	0.000	0.000	9.19%	36.20%	96 \$2.83	29,74%
PAL-S Buildings Fire Oil 1,000 ciallons 2010 2 734,769 10,1303,040 \$1,635,682 83415 1 7,517,597 0,000 0,000 PAL-S Buildings Fire Oil 1,000 ciallons 2011 2 56,643 78,347,74 \$15,832,18 83415 1 5,813,142 0,000 0,000 PAL-S Buildings Fire Oil 1,000 ciallons 2004 3 \$19,677 71,113,125 \$504,038 83415 1 \$531,300 0,000 0,000 INL-S Buildings Fire Oil 1,000 ciallons 2004 3 \$342,216 \$560,033 83415 1 \$345,774 0,000 0,000 INL-S Buildings Fire Oil 1,000 ciallons 2007 3 \$342,21 \$50,033 \$8415 1 \$345,777 0,000 0,000 INL-S Buildings Fire Oil 1,000 ciallons 2007 3 \$342,21 \$50,633 \$345,24 \$340,937 \$8415	Buildings	Fuel Oil	1,000 Gallons	1.55	796.3			1,239,650		83415	1	8,161,890	0000	0000'0	-14.02%	-107,38%	38% \$1.56	-81.88%
PAL-8 Baildings Fire Oil 1,000 Cadlons 2011 2 566.453 78,334.734 51,835.218 83415 1 5,813.142 0.000 0.000 DAL-8 Baildings Fire Oil 1,000 Cadlons 2003 3 510,677 71,713.240 8504.038 83415 1 5,321,830 0.000 0.000 DAL-8 Baildings Firet Oil 1,000 Cadlons 2004 3 224,832 44,829.14 5,476.31 83415 1 3,326.70 0.000 0.000 DAL-8 Baildings Firet Oil 1,000 Cadlons 2004 3 5,422.16 5802.03 83415 1 3,325.70 0.000 DAL-8 Baildings Firet Oil 1,000 Cadlons 2007 3 5,422.16 5802.03 83415 1 3,135.70 0.000 DAL-8 Baildings Firet Oil 1,000 Cadlons 2007 3 5,432.16 5,802.63 860.263 83415 1 4,113.62 0.000 0.	Buildings	Fiel Oil	1,000 Gallons		734.0			11,635,682		83415	1	7,517,597	0.000	0000	-8.57%	24,21%	% \$2.23	30.19%
DAL-S Buildings Flet Oil 1,000 Caldons 200.3 3 19,677 71,134.26 \$504.038 83415 1 5,321,390 0,000 0,000 INL-S Buildings Haet Oil 1,000 Caldons 200.4 3 324,837 4,829.74 \$610.73 83415 1 3,326,788 0,000 0,000 INL-S Buildings Haet Oil 1,000 Caldons 200.6 3 440.652 55,926.20 866.263 83415 1 3,435.70 0,000 0,000 INL-S Buildings Haet Oil 1,000 Caldons 200.7 3 440.652 55,921.498 866.263 83415 1 3,435.70 0,000 0,000 INL-S Buildings Haet Oil 1,000 Caldons 200.7 3 15,401.64 860.263 83415 1 3,435.70 0,000 0,000 INL-S Buildings Haet Oil 1,000 Caldons 201.1 3 15,401.64 31,401.64 85415.71 1 3,435.74 0,000 0,000 INL-S	Buildings	Fuel Oil	1,000 Gallons		567.4			11,835.218		83415	10	5,813,142	0.000	0.000	-29.32%	10.87%	96 \$3.23	31,08%
NLL-S Buildings Fact Did 1,000 Callona 2004 3 29,4837 4,4829 T44 5476,340 83415 1 3,236.768 0.000 0.000 INL-S Buildings Fact Did 1,000 Callona 2004 3 354,290 4,5297,520 85412 1 3,435.700 0.000 0.000 INL-S Buildings Fact Oil 1,000 Callona 2007 3 344,23,116 3892,243 83415 1 3,435.70 0.000 0.000 INL-S Buildings Fact Oil 1,000 Callona 2007 3 344,341 3 4,113,547 0.000 0.000 INL-S Buildings Fact Oil 1,000 Callona 2013 3 35,002,48 360,268 35415 1 3,435,77 0.000 0.000 INL-S Buildings Fact Oil 1,000 Callona 2013 3 35,500 3,500 3,500 0.000 0.000 INL-S Buildings Fact Oil 1,000 Callona <td>Buildings</td> <td>Fuel Oil</td> <td>1,000 Gallons</td> <td>J.</td> <td>\$19.</td> <td></td> <td></td> <td>304.038</td> <td></td> <td>83415</td> <td>1</td> <td>5,321,930</td> <td>0,000</td> <td>0,000</td> <td></td> <td></td> <td>20.97</td> <td></td>	Buildings	Fuel Oil	1,000 Gallons	J.	\$19.			304.038		83415	1	5,321,930	0,000	0,000			20.97	
NLL-S Buildings Fiel Oil 1,000 Callons 2005 3 355,490 46,297 620 5610,073 8610,073 8610,073 8610,073 8610,073 8610,073 8610,073 8610,073 8610,073 861,287 861,287 83415 1 3,433,70 0,000 0,000 INL-S Buildings Fiel Oil 1,000 Callons 2007 3 364,221 5,802,633 83415 1 3,134,737 0,000 0,000 INL-S Buildings Fiel Oil 1,000 Callons 2007 3 354,221 5,602,633 83415 1 3,543,237 0,000 0,000 INL-S Buildings Fiel Oil 1,000 Callons 2010 3 35,031,18 556,097 83415 1 3,543,23 0,000 0,000 INL-S Buildings Fiel Oil 1,000 Callons 2010 3 1,534,750 556,997 83415 1 3,543,251 0,000 0,000 INL-S Buildings Fiel Oil	Buildings	FuelOil	1,000 Gallons	M	324,1			9476,340		83415	T	3,326,768	0.000	0.000	-59.97%	5.81%	76.12 av	33,85%
Poll-S Buildings Fuel Oil 1,000 Callons 2006 3 5,022,498 \$852,512 \$83415 1 4,113.562 0,000 0,000 INL-S Buildings Fuel Oil 1,000 Callons 2007 3 54,022,498 \$867,263 83415 1 4,113.562 0,000 0,000 INL-S Buildings Fuel Oil 1,000 Callons 2007 3 54,022,498 \$867,263 83415 1 4,135.51 0,000 0,000 INL-S Buildings Fuel Oil 1,000 Callons 2007 3 773,410 51,534,720 561,997 83415 1 3,843,310 0,000 0,000 INL-S Buildings Fuel Oil 1,000 Callons 201 3 773,410 51,534,720 561,997 83415 1 3,843,330 0,000 0,000 INL-S Buildings Fuel Oil 1,000 Callons 201 3 215,913 52,955 8410,733 83415 1 3,502,136 0,000 0,000 INL-S Buildings	Buildings	File Oil	1,000 Gallons		335.	Š		3610.073		83415	110	3,435,700	0.000	0.000	3.17%	21.92%	96 \$1.82	19.36%
INL-S Buildings Fist Oil 1,000 Callones 2007 3 54,221 53,022,498 5862,263 83415 1 3,944,747 0,000 0,000 INL-S Buildings Hael Oil 1,000 Callone 2009 3 45,4348 6,400,004 83415 1 3,547,477 0,000 0,000 INL-S Buildings Hael Oil 1,000 Callone 2009 3 375,001 31,750,138 850,5097 83415 1 3,824,336 0,000 0,000 INL-S Buildings Hael Oil 1,000 Callone 2011 3 375,001 31,750,138 850,5097 83415 1 3,243,564 0,000 0,000 INL-S Buildings Hael Oil 1,000 Callone 201 3 375,001 31,750,138 857,509 83415 1 2,343,83 0,000 0,000 INL-S Buildings Hael Oil 1,000 Callone 2004 4 341,977 47,192,826 3577,93 83415 1 <	Buildings	Fuel Oil	1,000 Gallons		401.0			3892.512		83415	J.	4,113,562	0.000	0.000	16.48%	31.65%	52.22	18.16%
DNL-S Buildings Part Oil 1,000 Caldons 2009 3 464,348 64,680,024 51,691,654 83415 1 4,755,315 0,000 0,000 INL-S Buildings Raci Oil 1,000 Caldons 2009 3 375,400 31,754,175 850,897 83415 1 3,841,361 0.000 0.000 INL-S Buildings Fact Oil 1,000 Caldons 2011 3 235,001 850,897 83415 1 3,743,564 0.000 0.000 INL-S Buildings Fact Oil 1,000 Caldons 2011 3 235,015 87,8445 87,8435 87,8435 1 2,343,843 0.000 0.000 INL-S Buildings Fact Oil 1,000 Caldons 2003 4 34,10,332 857,936 857,136 0.000 0.000 INL-S Buildings Fact Oil 1,000 Caldons 2004 4 34,10,332 857,236 857,137 8,415 1 2,492,49 0.000 0.0	Buildings	Fuel Oil	1,000 Gallons	160	384.			867,263		83415	1	3,934,747	0.000	0,000	4,54%	-2.91%	% \$2.26	1.56%
PAL-S Buildings Fact Oil 1,000 Gallons 2009 3 375,440 51,234,720 360,997 84115 1 3,824,330 0,000 0,000 INL-S Buildings Fact Oil 1,000 Gallons 2010 3 375,001 81,504,135 83415 1 2,843,26 0,000 0,000 INL-S Buildings Fact Oil 1,000 Gallons 2013 4 34,917 7,179,286 827,975 83415 1 2,938,828 0,000 0,000 INL-S Buildings Fact Oil 1,000 Gallons 2004 4 341,977 41,92,886 83415 1 2,938,827 0,000 INL-S Buildings Fact Oil 1,000 Gallons 2004 4 341,977 41,92,880 83415 1 2,492,949 0,000 0,000 INL-S Buildings Fact Oil 1,000 Gallons 2006 4 130,956 8547,939 83415 1 2,492,949 0,000 0,000	Buildings	Puel Oil	1,000 Gallons		164		14	1,691,654		83415	1	4,755.315	0.000	0.000	17.26%	48.73%	76 \$3.64	38.04%
INL-S Buildings Fine Oil L000 Callons 2010 3 353,013 8 591,6997 85415 1 3,540,326 0.000 0.000 INL-S Buildings Fine Oil 1,000 Callons 2011 3 22,003,718 \$729,756 83415 1 2,371,964 0.000 0.000 INL-S Buildings Fine Oil 1,000 Callons 2004 4 341,97 47,192,866 5377,936 83415 1 2,492,949 0.000 0.000 INL-S Buildings Fine Oil 1,000 Callons 2004 4 341,97 47,192,866 5857,793 83415 1 2,492,949 0.000 0.000 INL-S Buildings Fine Oil 1,000 Callons 2005 4 1430,260 17,975,860 5857,793 83415 1 2,482,949 0.000 0.000 INL-S Buildings Fine Oil 1,000 Callons 2006 4 130,260 17,975,860 5855,709 83415 1 <td>Buildings</td> <td>Fiel Oil</td> <td>1,000 Gallons</td> <td>u.</td> <td>373,4</td> <td></td> <td></td> <td>080 619</td> <td></td> <td>83413</td> <td>1</td> <td>3,824,340</td> <td>000'0</td> <td>0.000</td> <td>-24.34%</td> <td>-173.25%</td> <td>35% \$1,56</td> <td>492'611-</td>	Buildings	Fiel Oil	1,000 Gallons	u.	373,4			080 619		83413	1	3,824,340	000'0	0.000	-24.34%	-173.25%	35% \$1,56	492'611-
NII-S Buildings Thet Oil 1,000 caldons 2011 3 23,035,718 \$5.85,856 \$5.315 1 2,374,364 0,000 0,000 NNL-S Buildings Finet Oil 1,000 caldons 204 4 341,977 47,192,826 5470,733 83415 1 2,492,838 0,000 0,000 NNL-S Buildings Finet Oil 1,000 caldons 2004 4 341,977 47,192,826 5470,733 83415 1 2,492,919 0,000 0,000 NNL-S Buildings Finet Oil 1,000 caldons 2006 4 134,237 33,295,616 5851,793 83415 1 2,492,919 0,000 0,000 NNL-S Buildings Finet Oil 1,000 caldons 2006 4 130,260 3585,270 83415 1 1,333,972 0,000 0,000 NNL-S Buildings Finet Oil 1,000 caldons 2006 4 130,358 2,248,240 83415 1 1,373,972	Buildings	Firel Oil	1,000 Gallons	2010 3	375.1			1916,997		83415	1	3,840,326	0.000	0.000	0,42%	32.190 ₆	96 \$2,45	32.21%
INL-S Buildings Fire Oil 1,000 Gallons 2003 4 29,804.168 5279.756 854.15 1 2,935.828 0.000 0.000 DAL-S Buildings Fire Oil 1,000 Gallons 2004 4 341.977 47,192.826 5470.733 83415 1 2,592.132 0.000 0.000 DAL-S Buildings Fire Oil 1,000 Gallons 2005 4 13,595.861 5557.939 83415 1 2,492.949 0,000 0,000 DAL-S Buildings Fire Oil 1,000 Gallons 2006 4 13,975.880 2586.270 83415 1 2,492.949 0,000 0,000 DAL-S Buildings Fire Oil 1,000 Gallons 2006 4 13,975.880 2586.270 83415 1 1,333.972 0,000 0,000 DAL-S Buildings Fire Oil 1,000 Gallons 2006 4 13,975.880 2590.506 83415 1 1,573.209 0,000 0,000 </td <td>Buildings</td> <td>Thefoil</td> <td>1,000 Gallons</td> <td>2011 3</td> <td>231.5</td> <td></td> <td></td> <td>786.505</td> <td></td> <td>83415</td> <td>1</td> <td>2,374,964</td> <td>0.000</td> <td>0.000</td> <td>-61.70%</td> <td>-16.594.</td> <td>946 \$3.39</td> <td>27.90%</td>	Buildings	Thefoil	1,000 Gallons	2011 3	231.5			786.505		83415	1	2,374,964	0.000	0.000	-61.70%	-16.594.	946 \$3.39	27.90%
DAL-S Buildings Fire Oil 1,000 Gallons 2004 4 341,977 47,192,826 \$470,733 83415 1 3,502,132 0.000 0.000 DAL-S Baildings Fire Oil 1,000 Gallons 2005 4 243,432 33,593,616 \$557,939 83415 1 2,492,949 0,000 0,000 DAL-S Buildings Fire Oil 1,000 Gallons 2006 4 13,797,880 \$285,270 83415 1 1,433,977 0,000 0,000 DAL-S Buildings Fire Oil 1,000 Gallons 2006 4 13,245,716 \$390,050 83415 1 1,573,129 0,000 0,000 DAL-S Buildings Fire Oil 1,000 Gallons 2006 4 1333,297 0,000 0,000 0,000 DAL-S Buildings Fire Oil 1,000 Gallons 2007 4 1334,97 0,000 0,000 0,000	Buildings	Fuel Oil	1,900 Gallons	2003 4	288.4		Till Seesa	279.756		83415	1	2,953.828	0.000	0.000			50.97	
NIL-S Buildings Fine Oil 1,000 Gallons 2005 4 243-432 33.595.616 \$557.939 83415 1 2.492.949 0,000 0,000 NIL-S Buildings Fine Oil 1,000 Gallons 2006 4 130.260 17,975.880 \$2385.270 83415 1 1,333.972 0,000 0,000 NIL-S Buildings Fine Oil 1,000 Gallons 2007 4 133.32 22.56,716 8390.969 83415 1 1,673.159 0,000 0,000 NIL-S Buildings Fine Oil 1,000 Gallons 2007 4 133.32 22.56,716 8390.969 83415 1 1,673.159 0,000 0,000 NIL-S Buildings Fine Oil 1,000 Gallons 2007 4 133.32 22.56,716 8390.969 83415 1 1,673.159 0,000 0,000 NIL-S Buildings Fine Oil 1,000 Gallons 2007 4 133.32 22.56,716 23.90.969 83415 1 1,673.159 0,000 0,000 NIL-S Buildings Fine Oil 1,000 Gallons 2007 4 133.32 22.56,716 23.90.969 83415 1 1,673.159 0,000 0,000 NIL-S Buildings Fine Oil 1,000 Gallons 2007 4 130.32 22.56,716 23.90.969 83415 1 1,673.159 0,000 0,000 NIL-S Paris Oil Oi	Buildings	Fuel Oil	1,000 Gallons	1	341.5			3470,733		83415	1	3,502,132	0.000	0.000	15.66%	40.57%	% \$1.38	29.54%
INL-S Buildings Fine Ind Ind Gallone 2006 4 130.260 17,975.860 5285.270 83415 1 1,333.972 0.000 0.000 INL-S Buildings Fine Oil 1,000 Gallone 2007 1,533.25 2,546.216 539.050 84115 1 1,573.169 0.000 0.000 INL-S Buildings Fine Oil 1,000 Gallone 2007 1,533.25 2,546.216 5,390.650 84115 1 1,573.169 0.000 0.000 INL-S Buildings Fine Oil 1,000 Gallone 2007 1	Buildings	Fuel Oil	1,000 Gallons	2005 4	243.			557.939		83415	t	2,492,949	0,000	0,000	-10.48%	15.63%	96 \$2.29	39.94%
INL-8 Buildings Field 1,000 callons 2007 4 163.382 22,346,716 \$390,696 83415 1 1,673.169 0,000 0,000	Buildings	Fire10il	1,000 Gallons	2006 4	130.5			285.270		83415	4	1,333,972	0.000	0.000	-86.88%	-95.58%	8% \$2.19	4.66%
WIT O BALLET. TELEVIT LANGE-LILL AND 1 140-044 ADARCHILL AND 1 140-044 ADARCHILL AND A	Buildings	FielOil	1,000 Gallons	2007 4	163.3			390.696		83415	1	1,673,169	0.000	0.000	20.27%	26.98%		8,4296
FUELON 1,000 MINISTER 2006 4 145.272 20,000 4 223.616 53412 1 1,466.732 0,000 0,000	Buildings	Fuel Oil	1,000 Gallons	2008 4	145.372		20,061,336 \$	\$523.818		83415	1	1,488.732	0.000	0.000	-12.39%	35.41%	96 \$3.60	33.64%
\$199,552 834,5 1 1,017,264 0,000 0,000	Buildings	Firel Oil	1,000 Gallons		99.3			199,552		83415	17	1,017.264	0.000	0.000	-46.35%	-162,50%	50% \$2.01	+79.37%

N. C. A. C.						Energy Consumption and Cost	uption and	Cost						-	Estimated GHG Emissions	IC Emissions			Qualit	Quality Control	
60 Name Particular	PSO			Category	Subertogary	Deage Unit			leage Amount	BTUx 10°6	Cost (1,000 S)	Additional Informatio			Anthropogen	4	Scope 3 T&D Loss, MicCoge	Usage % Chunge	_	SCUMIT	S/Unit
	NE		INLS	Buildings	Fuel Oil	1,000 Gallons		14			\$332,015		83415	-	1,451,209	0.000	0.000	29.90%	39.90%	\$2.34	14.26%
0.10 CHASA Distance Property CHASA CHA	NE	603	INLS	Buildings	FileLOil	1,000 Gallons		13		7,970,360	\$424,129		83415	1	1,333,562	0,000	0.000	-8.82%	21,72%	\$3.26	28.06%
60 NACA Binkinger DAG Ribble Binkinger DAG Control CONTACA DAG Control CONTACA DAG CONTACA CONTACA <td>NE</td> <td>603</td> <td>INL-S</td> <td>Buildings</td> <td>ING</td> <td>Billion BTUs</td> <td>2003 1</td> <td>0.3</td> <td></td> <td></td> <td>\$7,062</td> <td></td> <td>83415</td> <td>-</td> <td>50.896</td> <td>0.000</td> <td>0.000</td> <td></td> <td></td> <td>\$7.36</td> <td></td>	NE	603	INL-S	Buildings	ING	Billion BTUs	2003 1	0.3			\$7,062		83415	-	50.896	0.000	0.000			\$7.36	
60 BASS BASINAMINE IX.G Billinge TIX, 20 CATALON STATE TATALON STATE TATALON STATE TATALON STATE TATALON STATE TATALON STATE TATALON TATALON STATE TATALON TATALON STATE TATALON TATALON STATE TATALON	見	603	INL-S	Buildings	ING	Billion BTUs	2004	T		التريد	\$8.096		83415	4	55,832	0.000	0.000	8.84%	12,77%	\$7.70	4,31%
60 NASA Building LVG Billing Billing LVG Billing LVG Billing Billing LVG Billing Billing LVG Billing Billing LVG Billing Billing LVG <t< td=""><td>另</td><td>603</td><td>INL-S</td><td>Buildings</td><td>ING</td><td>Billion BTUs</td><td>2005 1</td><td>0</td><td></td><td></td><td>\$7,019</td><td></td><td>8341.5</td><td>1</td><td>41,553</td><td>0.000</td><td>0.000</td><td>-34.36%</td><td>-15,34%</td><td>\$8.96</td><td>14,15%</td></t<>	另	603	INL-S	Buildings	ING	Billion BTUs	2005 1	0			\$7,019		8341.5	1	41,553	0.000	0.000	-34.36%	-15,34%	\$8.96	14,15%
60 NAME Statistical Prop. 18.45	NE	603	INL-S	Buildings	ING	Billion BTUs	2006 1	1.6		44.5	\$12.191		83415	1	57.848	0.000	0.000	28.17%	42,42%	\$11.18	19.85%
60 District D	N	209	INLS	Buildings	TNG	Billion BTUs	2007 1	1			\$12.530		83415	1	70,373	0.000	0.000	17.80%	2,71%	\$9,43	-18.36%
(2) Dissipation Dissipation Dissipation Dissipation String 1 (2) String String String 1 (2) String	NE	603	INLS	Buildings	ING	Billion BTUs	2008	1.			\$8,803		83413	1	56.522	0.000	0.000	-24.519a	42.34%	\$8.27	-14.32%
(6) DIAS	NE	603	INLS	Buildings	LNG	Billion BTUs	2009 1	1.			\$19,403		83415	1	87.144	0.000	0.000	35.14%n	54.63%	\$11.82	30.05%
901 NIA-5 Billide Diff. 9 ACA DE DIRACE RACK DIRACE R	NE		INL-S	Buildings	UNG	Billion BTUE	Z010 I	1.			\$22.166		83415	1	84.756	0.000	0.000	-2.82%	12,475u	\$13.88	14.86%
6.9 NAME RIMING NAME RIMING 1.44	NE NE		INL-S	Buildings	ING	Billion BTUs	2011 1	0.3	8	A 12	\$13,559		83415	1	49.092	0.000	0.000	-72,6590	-63,4894	\$14,66	5.31%
6.0 DNG Billinge LNG Billinge LNG Billinge LAS Billinge 1.5 CARA Billinge LNG Billinge Billinge LNG Billinge Billinge B	K		INL-S	Buildings	DNI	Billion BTUs	2003 2	1.4	ĺ		\$11:995		83415	4	86,454	0.000	0.000			\$7.36	
64.5 Buildings LNG Bellion ETT 200 LNG Buildings LNG Bellion ETT 200 1,100 0.100 0.000 0.000 0.000 0.110 0.110 06. RNL-S Buildings LNG Building LNG Building 1,100 21.20 1,110 1,100 0.110 0.000 0.000 21.20 1,110 0.000 1,100 0.000 0.000 0.000 21.20 1,110 0.0000 0.000 0.000 0.0000	N	603	INLS	Baildings	ING	Billion BTUs		1.4			\$11.372.		83415	4	75.946	0.000	0.000	-13.849 _u	-5.48%	\$7.95	7.34%
6.05 NAS. Bishlinger ING Bishlinger	NE	603	INLS	Buildings	TNG	Billion BTUs		1.			\$15.339		83415	7	79.608	0.000	0.000	4.60%	25.86%	\$10.23	22.29%
640 DRA-S Ballading LNG Billading TTI CPO LNG Billading TTI CNG Billading TTI CNG LNG Billading TTI SNG L145 L145 Billading TTI LNG Billading TTI SNG Billading TTI SNG BILLAG	NE		INI-S	Buildings	ING	Billion BTUs	2006 2	1			\$13,555		83415	1	62.625	0.000	0.000	-27.1296	-13.16%	\$11.49	10.98%
(4) (4) <td>NE</td> <td></td> <td>INLS</td> <td>Buildings</td> <td>ING</td> <td>Billion BTUs</td> <td>2007 2</td> <td></td> <td></td> <td></td> <td>\$18,746</td> <td></td> <td>83415</td> <td>-</td> <td>95.052</td> <td>0.000</td> <td>0.000</td> <td>34.12%</td> <td>27.69%</td> <td>\$10.47</td> <td>-9,75%</td>	NE		INLS	Buildings	ING	Billion BTUs	2007 2				\$18,746		83415	-	95.052	0.000	0.000	34.12%	27.69%	\$10.47	-9,75%
64.9. N1.5. Bublidges DAG Bubling BRTIS 200. 1,165.000 815.94 67.13 0.00 0.00 0.00 0.00 0.00 0.00 1,155.00 1,155.00 815.94 8.11.5 0.12.26 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.12.64 0.14.50 0.00	NE	603	INL-S	Buildings	DNI	Billion BTUs		1.3	-		\$27,417		83415	1	98.024	0.000	0.000	3.03%	31.63%	\$14.84	29.49%
(4) N.N.S. Bachkings I.N.G Billian BTITS 211 (53) 1145.300 \$15.49 \$15.45 \$1.09% \$21.53 \$1.00 \$1.00 \$1.00 \$1.00%	NE		INL-S	Buildings	ING	Billion BTUs		T			\$15.107		83415	1	69.524	0.000	0.000	-40.99%	-81.49%	\$11.53	-28.72%
630 NLAS Buildings U.O. Bulline BTU1 50.01 1.517,000 82.95.91 81.13 1 66.10 0.000 0.000 0.000 23.74 9.007/10 0.000 60.00 0.000 <td>NE</td> <td>603</td> <td>INLS</td> <td>Bulldings</td> <td>TNG</td> <td>Billion BTUs</td> <td></td> <td>1.</td> <td></td> <td></td> <td>\$16.966</td> <td></td> <td>83415</td> <td>45</td> <td>61,723</td> <td>0.000</td> <td>0.000</td> <td>-12.64%a</td> <td>10.96%n</td> <td>\$14.59</td> <td>20.95%</td>	NE	603	INLS	Bulldings	TNG	Billion BTUs		1.			\$16.966		83415	45	61,723	0.000	0.000	-12.64%a	10.96%n	\$14.59	20.95%
60.1 INAS Balidanger ING Balidanger ILL Date of the color of the color of state of the color of	NE		INIS	Buildings	ING	Billion BTUs		1.			\$22.351		83415	-	80.510	0.000	0.000	23.34%	24.09%	\$14.73	0.99%
643 RNL-S Banklings LNG Balking BTUs 2004 3 0,000 6,000 0,000	NE		INLS	Buildings	ING	Billion BTUs	2003 3	0.0			\$0.000		83415	1	0.000	0.000	0.000			#DIV/0!	
603 INA-S. Baldings LNG Billion BTH 2005 3 0.381 351,000 38.113 1 20.226 0.000 0.000 100.00% 3 10.00% 3	NE	503	INL-S.	Buildings	TNG	Billion BTUs	2004 3	0.0			\$0.000		83415	-	0.000	0.000	0.000	#DIV/0:	#DIV/0!	#DIV/00	#DIV/0!
603 NA-25 Building STU-3 District Control State of the	NE	603	INLS	Buildings	ING	Billion BTUs		0.7			\$4.118		83415	7	20.220	0.000	0.000	100.00%	100.00%	\$10.81	#DIV/0!
643 NL-25 Publishings LNG Bellikon BTUs 2007 3 4411000 \$13.097 84115 1 22.874 0.000 0.000 46.19% 27.20% 86.85 643 NL-35 Buildings LNG Billion BTUs 2008 3 0.6401 80.000 84.115 1 2.5514 0.000 0.000 41.29% 21.02% 86.50 663 NL-35 Buildings LNG Billion BTUs 2.016 3 0.640 86.70 86.70 0.000 0.000 41.25% 1.000 41.25% 1.000 41.04 1.00 4.00 0.000 41.25% 1.01 3 4.64 46.400 87.83 84.15 1 2.4525 0.000 0.000 41.05% 81.07 1 2.7500 87.70 81.07 81.07 81.07 81.07 81.07 81.07 81.07 81.07 81.07 81.07 81.07 81.07 81.07 81.07 81.07 81.07 81.07	NE	П	INL-S	Buildings	ING	Billion BTUs	107-5	0.4			54,188		83415	1.	21.760	0.000	0.000	7.07%	1.67%	\$10.21	-5.81%
643 NLL-S Baildings LVG Billion BTUs 2068 3 0,800 51,237 51,237 6,199 6,199 6,199 6,199 6,199 6,199 6,199 6,199 6,199 6,199 6,199 6,199 6,199 6,199 6,199 8,141 1 2,423 0,100 4,11,278 1,11,278	NE	603	INL-S	Buildings	ING	Billion BTUs	2007 3	0.0		3	53.697		83415	1	22,874	0.000	0.000	4,87%	-13.28%	\$8.58	-19,08%
643 NL-S Baildings LNG Billion BTUs 2.62.0 \$6.020 8.415 1 2.82.6 0.000 0.000 4.25.8% 1.19.4% \$10.71 663 NL-S Baildings LNG Billion BTUs 2.015 3.4450 5.6.20 8.3415 1 2.4625 0.000 0.000 9.000 1.19.2% 1.13.4% \$10.13 663 NL-S Baildings LNG Billion BTUs 2.015 4.54.00 5.6.49 8.3415 1 2.46.25 0.000 0.000 9.000 1.17.3% <t< td=""><td>NE</td><td>209</td><td>INLS</td><td>Buildings</td><td>ING</td><td>Billion BTUs</td><td></td><td>0.1</td><td>di la</td><td></td><td>\$13.212</td><td></td><td>83/15</td><td>-1</td><td>42.511</td><td>0.000</td><td>0.000</td><td>46.19%</td><td>72.02%</td><td>\$16.49</td><td>48.00%</td></t<>	NE	209	INLS	Buildings	ING	Billion BTUs		0.1	di la		\$13.212		83/15	-1	42.511	0.000	0.000	46.19%	72.02%	\$16.49	48.00%
603 INL-S Buildings ING Billion BTUs 2010 3 0.45 45.730 85.139 85.139 1 24.62.5 0.000 0.000 1.00% <	NE	503	INL-S	Buildings	UNG	Billion BTUs		.0			\$6.020		83415	1	29,826	0.000	0.000	42,53%	-119,47%	\$10.71	-53.98%
663 INL-S Baildings LNG Billion BTUs 273 000 573 841 1 255 88 0.000 0.000 19,02% 4.13% 13.13 663 INL-S Baildings LNG Billion BTUs 2004 4 0.445 141,000 8.445 1 255.28 0.000 0.000 37.53% 4.1440 8.73 663 INL-S Baildings LNG Billion BTUs 2004 4 1.245.000 86.149 1 4.55.88 0.000 0.000 3.73% 4.140% 8.739 603 INL-S Baildings LNG Billion BTUs 1.045.000 8.000 8.011 1 4.65.75 0.000 3.000 8.010 8.144.0 <td>NE</td> <td></td> <td>INI-S</td> <td>Buildings</td> <td>ING</td> <td>Billion BTUs</td> <td></td> <td>0.4</td> <td></td> <td></td> <td>\$6.739</td> <td></td> <td>83415</td> <td>1</td> <td>24,625</td> <td>0.000</td> <td>0.000</td> <td>-21,129%</td> <td>10.67%</td> <td>\$14.52</td> <td>26,25%</td>	NE		INI-S	Buildings	ING	Billion BTUs		0.4			\$6.739		83415	1	24,625	0.000	0.000	-21,129%	10.67%	\$14.52	26,25%
643 NL-S Balklings ING Billion BTUs 24.0 4.0 481.000 51.342 83.415 1 25.528 0.000 0.000 51.36 51.36 51.36 663 INL-S Balklings LNG Billion BTUs 2004 4 77.0 770,000 56.149 83.415 1 60.00 0.000 38.1346 87.140 87.140 603 INL-S Bauklings LNG Billion BTUs 2004 4 0.000 86.149 83.415 1 60.00 0.000 38.15% 6.27% 81.440 603 INL-S Bauklings LNG Billion BTUs 2004 0.000 80.000 8.010 0.000 9.000	NE	603	INL-S	Buildings	LNG	Billion BTUs	2011 3	.0.			\$7,857		83413	1	30,410	0.000	0.000	19,02%	14,23%	\$13,71	-5,92%
663 INL-S Baildings LNG Billion BTUs 26.149 36.149 40.865 0.000 0.000 31.53% 41.40% 57.99 663 INL-S Baildings LNG Billion BTUs 2004 1.245 1.245.000 81.739 83415 1 6.0675 0.000 0.000 38.13% 65.70% 81.440 87.99 693 INL-S Baildings LNG Billion BTUs 2006 4 0.000 80.000 82.145 1 0.000 0.000 82.15% 65.70% 81.440 81.15 1 0.000 0.000 0.000 82.10% 81.15 1 0.000 0.000 82.10% 81.15 1 0.000	NE NE	sen-	INL-S	Buildings	ING	Billion BTUs	10	0.4		481	\$3.542		83415	-	25.528	0.000	0.000			\$7.36	
663 INL-S Buildings LNG Billion BTUs 200 4 1.245.000 817329 83415 1 66073 0.000 0.000 38.15% 65.70% 81440 643 INL-S Buildings LVG Billion BTUs 2006 4 0.000 80,000 82415 1 0.000 0.000 9.000 9.000 80.000 10.000 9.000 <t< td=""><td>型</td><td>£09</td><td>INL-S</td><td>Buildings</td><td>ING</td><td>Billion BTUs</td><td></td><td>0.</td><td></td><td></td><td>\$6.149</td><td></td><td>83415</td><td>1</td><td>40,865</td><td>0.000</td><td>0.000</td><td>37.53%u</td><td>42.40%</td><td>\$7.99</td><td>7.79%</td></t<>	型	£09	INL-S	Buildings	ING	Billion BTUs		0.			\$6.149		83415	1	40,865	0.000	0.000	37.53%u	42.40%	\$7.99	7.79%
663 INL-S Baildings LNG Billion BTUs 200 4 0,000 8,000 83,115 1 0,000 0,000 4,000 6,000 4,000 6,000 4,000 6,000 4,000 6,000 4,000 6	以	603	INLS	Buildings	DNI	Billion BTUs	1	1			\$17.929		83413	1	66,073	0.000	0.000	38.13%	65.70%	\$14.40	44,55%
663 NL-S Buildings LNG Billion BTUs 2007 4 0.373 973.000 85.124 1 19.796 0.000 0.000 0.000 6.000 0.000 0.000 85.33 663 NL-S Buildings LNG Billion BTUs 2006 4 0.000 0.000 8.000 0	N		INLS	Buildings	LNG	Billion BTUs		0.0			\$0,000		83415	1	0.000	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
603 NL-S Buildings LNG Buildings 50.000 80.000 80.000 80.00 0.000	NE		INLS	Buildings	TNG	Billion BTUs	2007 4	0			53,124		83415	-	19,796	0.000	0.000	100.00%	100.00%	\$8.38	#DIA/0!
663 INL-S Buildings LNG Billion BTUs 6.000 6.000 6.000 6.000 6.000 6.000 6.000 6.000 4.00V/m	NE	209	INL-S	Buildings	ING	Billion BTUs	2008 4	0.0			\$0.000	'n	83415	4	0.000	0.000	0000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
663 PLL-s Dublidings LNG Billion BTUs 2010 4 0.44.000 \$6.933 83.415 1 24.62.5 0.000 0.000 0.000 100.00% \$14.93 \$14.93 663 PIN-S Buildings LNG Buildings LNG Buildings 1.00 0.000 0.000 0.000 0.000 0.000 9.000 9.000 9.000 9.000 0.000 9.000	NE	603	INL-S	Buildings	DNI	Billion BTUs	100	0.0			\$0.000		83415	1	0.000	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/01	#DIN/0!
603 INL-S Buildings ING Billion BTUs 2011 4 0.000 0.000 90.000 80.000 0.	NE	603	INL-S	Buildings	LNG	Billion BTUs	15	0.4	II	16.5	\$6.935		83415	1	24.625	0.000	0.000	100.00%	100.00%	\$14.95	#DIV/0!
603 INL-S Buildings LPG 1,000 Gallons 2004 I 73,561 6,749,212 \$71,568 83415 1 426,746 0,000 0,000 0,000 36,98 603 INL-S Buildings LPG 1,000 Gallons 2004 I 38,001 3,589,772 840,019 87415 I 226,959 0,000 0,000 38,0394 -78,6496 \$1,03 603 INL-S Buildings LPG 1,000 Gallons 2005 I 61,686 5,675,112 8,77,50 83415 I 358,832 0,000 0,000 36,759c 412,6	NE	603	INLS	Buildings	ING	Billion BTUs	100	(0.0	X		\$6,000		83415	-	0.000	0.000	0.000	#DIV/0!	#DIA/0i	#DIA/0i	#DIA/0;
603 INL-S Buildings LPG 1,000 Gallons 2004 1 39,016 3,589,472 \$40,019 87415 1 226,959 0,000 0,000 38,0396 7.78,8496 \$1.03 603 INL-S Buildings LPG 1,000 Gallons 2005 1 61.686 5,675,112 \$77,590 87415 1 358,832 0,000 0,000 36,7596 18,26	出		INL-S	Buildings	LPG	1,000 Gallons	2003 1	73	20		\$71.568		83415	1	426.746	0.000	0.000			\$6.98	
663 INL-S Buildings LPG 1,000 Gallons 2005 I 61.686 5,675,112 \$77,590 83415 I 358,832 0,000 0,000 36,75% 48,36% \$1.26	SE		INL-S	Buildings	IPG	1,000 Gallons	2004 1	39			\$40.019		83415	1	226.959	0.000	0.000	-88.03%	-78.84%	\$1.03	4.89%
	NE	0	INL-S	Buildings	LPG	1,000 Gallons	Z005 I	19			\$77,500		83415	4	358.832	0.000	0.000	36.75%	48.36%	\$1.26	18,36%

IDAL, FY. 2012, CETOR 127-11 sales 3.2 Energy & Water (603) 1177:0123 201924

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s osa	Site # Site	o Category	Subcategory	Usage Unit.	M	QTR U	Usage Amount	NTUX 1006	Cost (1,000 S)	Additional Information	Main Zip (Main Site See Zip Code	Scope Ant	Anthropogesic MrCO ₂ e	Blogenic MtCO ₂ e	Scope 3 T&D Loss, MCO2e	Usage 66 Change	Cost % Change	SONIE	Sytterit % Change
NE 603	H INL-S	Buildings	The	1,000 Gallons	2006 1	36	36.576 3,3	3,364,992	\$54,352		83415	-	212,765		0.000	0.000	-68.659m	42.5908	\$1.49	15,45%
NE 603	3 INI-S	Buildings	LPG	1,000 Gallous	2007 1	62	62,752 5,	5,773,184	\$85,918		83415	1	365.	365.033 0.	0.000	0.000	41.71%	36.749m	\$1.37	-8.53%
NE 60	603 INL-S	Buildings	LPG	1,000 Gallons.	2008 1	87	158	8,092,136	\$177.404		83415	-	511	1	000	0.000	28.66%	\$1.57%	\$2.02	32.12%
NE 603	B INL-S	Buildings	LPG	1,000 Gallons	2009 1	72.3	.40	6,646,080	8134,769		83415	1	420	4	0.000	0.000	969L'TE	-31,64%	\$1.87	-8.11%
NF 603	3 INL-S	Buildings	LPG	1,000 Gallons	2010 1	86	86.099 T,5	7,921.108	\$146,432		83415	1	500.844		0.000	0.000	16.10%	7.96%	\$1.70	-9.69%
NE 603	3 INL-S	Buildings	D _G	1,000 Gallons	2011 1	6	94,096 8,0	8,656.832	5238,447		83415	1	547.363	ſ	0,000	0,000	8.50%	38.59%	\$2.53	32.89%
NE 603	3 INL-S	Buildings	LPG	1,000 Gallons	2003 2	iii	67,182 6,1	6,180,744	\$72.524		83415	1	390		0.000	0.000			\$1.08	
	B INL-S	Buildings	IPG	1,000 Gallons	2004 2		ĺ	5,592.128	\$64.661		83415	-7	353.	353.585 0.	0.000	0.000	-10.53%	-12.16%	\$1.06	-1.48%
NE 603	S INL-S	Buildings	LPG	1,000 Gallons	2005 2		71,230 6,3	6,553,160	\$85,898		83415	4	414.350	ì	0.000	0.000	14.67%	24.7296	\$1.21	11.79%
NE 603	3 INL-S	Buildings	LPG.	1,000 Gallons	2006 2		64.852 5.5	5,966,384	\$94,476		83415	1 1	377.	377,248 0.	0.000	0.000	-9.83%	9,080.6	\$1,46	17,22%
NE 603	33 INL-S	Buildings	EPG	1,000 Gallons	2007 2		87.723 8.0	8,070.516	\$132,517		83415	-	510	510.291 0.	0.000	0.000	26.07%	28.71%	\$1.51	3.56%
NE 603	3 INL-S	Buildings	The	1,000 Gallons	2008 2	13	133,286 12	12,262,312	\$297,889		83415	1	775	775,334 0.	0.000	0,000	34.18%	55,51%	\$2.23	32,41%
NE 603	3 INL-S	Buildings	The	1,000 Gallons	2 6002	11	114,980 10	10,578,160	\$220,425		83415	1	.899	668.846 0.	0.000	0.000	-15.92%	-35,14%	\$1.92	-16.58%
			IPG	1,000 Gallons	2010 2	13			\$284,386		83415	-	807		0.000		17.13%	22,49%	\$2.05	6.47%
NF 603	33 INL-S	Buildings	1.46	1,000 Gallons	2011 2	13	138.607 12	12,751,844	\$375,866		83415	-	806	806.286 0.	0.000	0.000	-0.10%	24.34%a	\$2.71	24.41%
NE 603		Buildings	The	1,000 Gallons	2003 3	18			\$16,831		83415	1	105		0.000	0.000			\$0.93	
NE 603	3 INL-S	Buildings	Dd	1,000 Gallons	2004 3		7,236 66		\$6.912		83415	1	42.092		0.000	0.000	-149,899%	-143,50%	\$0.96	2,56%
			LPG	1,000 Gallons	1			#	\$39.170		83415	-	187	on.	0.000		77,549%	82.35%	\$1.22	21.42%
NE 603	3 INL-S		LPG	1,000 Gallons	2006 3				\$39.346		83415	1	156	156.846 0.	0.000		-19.50%a	0.45%	\$1.46	16.70%
		Ш	LPG	1,000 Gallons	2007 3	21			533,997		83415	-	126.	ľ			-23,78%	-15,73%	\$1.56	6.50%
		Buildings	The	1,000 Gallons	2008 3				\$110,944		83415	-	307		0.000		58.77%	69.36%	\$2.10	25.67%
		Buildings	LPG	1.000 Gallons	2009 3	30			\$51,387		83415	1	178			0.000	-72,31%	-115,90%	\$1.68	-25.30%
			I.P.G	1,000 Gallons			ľ		\$84,906		83415	-	249	r			28.62%	39,48%	\$1.98	15,21%
	П		LPG	L,000 Gallons	2011 3	Г			5119,348		83415	1	270	1			7.54%	28.86%	\$2.57	23.05%
	H		LPG	1.000 Gallons		Į,			\$15,438		83415		123.444			0.000			\$0.73	
		ı.	1.00	1 000 Gallons		11			811.859		83415	4	64 622	Ì		0000	9050 16-	-30.1865	\$1.07	31 85%
			The	1,000 Gallons	1				58.848		83415	4	38.550			0.000	-67.63%	-34.03%	\$1.34	20.05%
NE 603	3 INL-S	Buildings	DAT	1,000 Gallons	2006 4	17		163,484	\$3.018		83415	-	10,337		0.000	0.000	-272.93%	-193.17%	\$1.70	21.39%
NE 603	S INL-S	Buildings	1PG	1,000 Gallons	2007 4	6.	6.706 61	616,952	\$10.605		83415	-	39.009		0.000	0.000	73,50%	71.54%	\$1.58	-7.40%
NE 603	B INL-S	Buildings	Dd	1,000 Gallons	2008 4	10	10.047 92	924.324	\$20,805		83415	-	58,444		0.000	0.000	33.25%	49.030a	\$2.07	23,63%
NE 603	3 INL-S	Buildings	DdT	1,000 Gallons	2009 4	8	5.583 51	513,636	\$8.271		83415	1	32,477		0.000	0.000	-79.96%	-151.54%	\$1.48	-39.78%
NE 603	3 INI-S	Buildings	LPG	1,000 Gallons	2010 4	19	19.803	1,821.876	\$38.662		83415	-	115.195		0.000	0.000	71.81%	78.61%	\$1.95	24.12%
NE 603	B INL-S	Buildings	LPG	1,000 Gallons	2011 4		7.983 73	734.436	\$20.252		83415	-	46,438		0.000	0.000	-148.06%	-91,09%	\$2.53	22.97%
603	33 INL-S	Buildings	Square Feet	1,000 Square Feet 2003	2003 4	4	4,464,917				83415	NA NA	0.000		0.000	0.000			\$0.00	
NE 603	B INL-S	Buildings	Square Feet	1,000 Square Feet 2004	2004 4	3,5	3,999,966				83415	NA.	0.000		0.000	0.000	-11.62%	#DIA/0!	\$0.00	#DIA/00
	S INI-S	Buildings	Square Feet	1,000 Square Feet 2005	2005 4	33	3,828,074				83415	NA.	0.000	ĺ	0.000	0.000	4,49%	#DIV/0!	20.00	#DIV/00
NE 603	B INL-S		Square Feet	1,000 Square Feet 2006	2006 #	4.	4,193,801				83415	NA	0.000		0.000	0.000	8.72%	#DIV/0!	\$0.00	#DIV/00
NE 603	3 IND-S	Buildings	Square Feet	1,000 Square Feet 2007	t 2002	4,0	4,691.853				83415	N. N.	0.000		0.000	0.000	10.62%	#DIV/0!	\$0.00	#DIN/0!
NE 603	33 INL-S	Buildings	Square Feet	1,000 Square Feet 2008	2008 4	4.5	4,378,910				83415	NA.	0.000	i	0.000	0.000	-7.15%	#DIV/0!	\$0.00	#DIV/0;
NE 603	B INL-S	Buildings	Square Feet	1,000 Square Feet 2009	2009 4		4,243.392				83415	NA.	0.000	ĺ	0.000	0.000	-3.19%	#DIA//01	\$0.00	#DIV/0!
NF 603	3 INI-S	Buildings	Square Feet	1.000 Source Feet 2010	2010 #		4 129.511				83415	NA	0.000		0.000	0.000	-2.76%	#DIV/0!	\$0.00	#DIV/0!

					Energy Consumption and Cost	nption and	Cost	ľ					2	timated GH	Estimated GHG Emissions			Quali	Quality Control	
PSO	Site #	Sifte	Cutegory	Subcategory	Usage Unit	W	QTR Use	Usage Amount	BTU x 10 %	Cost (1,000 5)	Additional Information	Main Site Zip Code	Scope	Anthropogenic MtCO ₂ e	Blogenic MtCO ₂ e	Scope 3 - T&D Loss, MtCO ₂ e	Usage % Change	Cast 96 Change	\$/Unit	\$/Unit
N	603	INL-S	Buildings	Square Feet	1,000 Square Feet 2011	H 2011 4	3,924.567	1951				83415	NA	0.000	0.000	0.000	-5.22%	#DIV/0!	\$0.00	#DIV/0!
NE	603	INL-S	Excluded	Electricity	Megawall Hour	2003 1	9,370	9,370,306 31	31,971,484	\$359,081		83415	2	3,856,130	0.000	254.007			\$0.04	
NE	603	INI-S	Excluded	Electricity	Megawait Hour	2007 1	9,29	9,293.400 31	31,709.081	\$206.783		83415	2	3,824,481	0.000	251.922	-0.83%	-73.65%	\$0,02	-72,23%
思	603	INI-S	Excluded	Electricity	Megawaft Hour	2008 1	89'8	8,683,100 25	29,626,737	5248.467		83415	73	3,573,327	0.000	235.379	-7.03%	16.78%	\$0.03	22.24%
見	603	INI-8	Excluded	Electricity	Megawalt Hour	2009 1	7,92	7,924,200 27	27,037.370	\$300.159		83415	12	3,261,019	0.000	214.807	-9.58%	17.22%	\$0.04	24,46%
見	603	INI-S	Excluded	Electricity	Megawatt Hour	2010 1	10,1	10,151,500 34	34,636,918	\$446.246		83415	2	4,177,612	0.000	275.184	21.94%	32,74%	\$0.04	13.83%
SE	603	INL-S	Excluded	Electricity	Megawaii Hour	2011 1	8,644,100	100	29,493,669	\$326,389		83415	62	3,367,245	0.000	221.804	-17,44%	-36.72%	\$0.04	-16.42%
ij	809	INL-S	Excluded	Electricity	Megawall Hour	2003 2	9,53	9,539,292 32	32,548.064	\$365.557		83415	67	3,925.672	0.000	258.588			\$0.04	
NE	803	INI-S	Excluded	Electricity	Megawatt Hour	2007 2	9,798.200		33,431,458	\$212,142		83415		4,032,220	0.000	265.606	2.64%	-72.32%	\$0.02	-76.99%
NE	603	INL-S	Exeluded	Electricity	Megawaii Hour	2008 2	8,076,200		27,555,994	\$245,470		83415	2	3,323,571	0,000	218.927	-21.32%	13.58%	\$0.03	28.77%
NE	603	INLS	Excluded	Electricity	Megawait Hour	2000 2	9,340	9,344,100 31	31,882,069	\$342,244		83415	5	3,845,346	0.000	253.297	13.57%	28.28%	\$0.04	17.02%
N	603	INLS	Excluded	Electricity	Megawatt Hour	2 0102	9,728.600	j	33,193,983	\$422.460		83415	1	4,003.578	0.000	263,720	3,95%	18.99%	\$0.04	15,65%
NE	603	INL-S	Excluded	Electricity	Megawatt Hour	2011 2	3,306,100		11,280,413	\$168,543		83415	2	1,287,867	0.000	84.833	-194.26%	-150.65%	\$0.05	14.82%
E	603	INLS	Excluded	Electricity	Медаман Ноиг	2003 3	8,110.605		27,673,384	\$310.808		83415	*1	3,337,730	0.000	219.860			\$0.04	
NE	603	INT-S	Excluded	Electricity	Megawatt Hour	2007 3	4,980,100		16,992.101	\$138.924		83415	2	2,049.444	0.000	134,999	-62.86%	-123.73%	\$0.03	-37,37%
呂	603	INL-S	Excluded	Electricity	Megawatt Hour	2008 3	7,349		25,077,859	\$258,601		83415	3	3,024,679	0.000	199,239	32,24%	46.28%	\$0.04	20,72%
NE	603	INL-S	Excluded	Electricity	Megawatt Hour	2009 3	9,43		32,195.973	\$369.997		83415	ri.	3,883,206	0.000	П	22,1196	30,11%	\$0,04	10.27%
NE	603	NI-S	Excluded	Electricity	Megawaff Hour	2010 3	1,96	7,961.700 27	27,165.320	\$355.370		83415	7	3,276,451	0.000	215.823	-18.52%	4.12%	\$0.04	12.15%
NE	603	INI-S	Excluded	Electricity	Megawatt Hour	2011 3	8,80	8,808.700 30	30,055,284	\$313.242		83415	13	3,431,363	0.000	226.027	9.629.0	-13,45%	\$0.04	-25,52%
NE	603	INT-S	Excluded	Electricity	Megawait Hour	2003 4	7,540,297		25,727,493	\$288.953		83415	2	3,103,033	0.000	204.400			\$0.04	
男	603	INL-S	Excluded	Electricity	Megawatt Hour	2007 4	7,49	7,499,400 25	25,587,953	\$221.906		83415	2	3,086,203	0.000		-0.55%	-30.21%	\$0.03	-29.51%
NE	603	INL-S	Excluded	Electricity	Megawatt Hour	2008 4	9,090.500		31,016.786	\$333,485		83415	2	3,740.983	0.000	246.422	17.50%	33,46%a	\$0.04	19.34%
NE	603	INL-S	Excluded	Electricity	Megawait Hour	2009 4	5,49	5,497,600 18	18,757,811	\$293.061		83415		2,262,409	0.000	149.027	-65.35%	-13,79%	\$0.05	31.18%
NE NE	603	INT-S	Excluded	Electricity	Megawatt Hour	\$ 0102	10,2	10,222,800 34	34,880,194	\$377.256		83415	2	4,206.954	0.000	277.116	46.22%	22.32%	\$0.04	-44.45%
EZ.	603	INL-S	Excluded	Electricity	Megawatt Hour	2011 4	7,78	7,781,200 26	26,549,454	\$306,994		83415	. 2	3,031,108	0.000	199.662	-31.38%	-22.8996	\$0.04	6.46%
見	603	INI-S	Excluded	Square Feet	1,000 Square Feet 2003	4 2003 4	147.325	125				83415	NA	0.000	0.000	0.000			\$0.00	
NE	603	INL-S	Excluded	Square Feet	1,000 Square Feet 2006	# 2006 4	147.325	\$25				83415	NA.	0.000	0.000	0.000	0.000%	#DIV/0;	\$0.00	#DIV/0!
NE	803	INI-S	Excluded	Square Feet	1,000 Square Feet 2007	8 2007 4	147,517	713				83415	NA	0.000	0.000	0.000	0.13%	#DIV/00	\$0.00	#DIV/00
NE	603	INI-S	Excluded	Square Feet	1,000 Square Feet 2008	H 2008 4	147.325	325				83415	NA	0.000	0.000	0,000	-0.13%	#DIV/0!	\$0.00	#DIV/0!
NE	603	INL-S	Excluded	Square Feet	1,000 Square Feet 2009	H 2009 4	147.325	525				83/15	NA	0.000	0,000	0.000	0.00%	#DIV/0!	20.00	#DIV/0/
NE	603	INL-S	Excluded	Square Feet	1,000 Square Feet 2010	# 2010 4	147.325	325				83415	NA	0.000	0.000	0.000	0.00%	//DIA/0/	\$0.00	#DIV/0!
E	603	INL-S	Excluded	Square Feet	1,000 Square Feet 2011	H 2011 4	147.325	125				83415	NA	0.000	0.000	00000	0,000,0	#DIV/0!	\$0.00	#DIV/0!
星	603	INI-S	Vehicles and Equipment Diesel	t Diesel	1,000 Gallons	2003 1	14.838	-	2,047,644	\$21.429		83415	1	151.954	0.000	0,000			\$1.44	
SE	809	INI-S	Vehicles and Equipment Diesel	t Diesel	1,000 Gallons	2004 1	4.921		860.679	\$7,529		83415	1	50.395	0.000	0.000	-201.52%	-184.62%	\$1.53	5.61%
出	509	INL-S	Vehicles and Equipment Diesel	1 Diesel	1,000 Gallons	2005 1	18.820		2,597,160	\$26.707		83415	1	192,733	0.000	0.000	73.85%	71.81%	\$1.42	-7.81%
E	603	INI-S	Vehicles and Equipment Diesel	t Diesel	1,000 Gallons	2006	21.693		2,993.634	\$44.716		83415	1	222, 155	0.000	0.000	13,24%	40,27%	\$2.06	31,16%
N.	603	INI-S	Vehicles and Equipment Diesel	t Diesel	1,000 Gallons	2007 1	37,434		5,165,892	\$101.346		83415	1	383.356	0.000	0,000	42.05%	55.88%	\$2.71	23,86%
N	603	INL-S	Vehicles and Equipment Diesel	1 Diesel	1,000 Gallons	2008 1	65.602		9,053,076	\$225.866		83415	1	671.820	0.000	0.000	42.94%	55.13%	\$3.44	21.37%
NE	603	NLS	Vehicles and Equipment Diesel	t Diesel	1,000 Gallons	2009 1	53.973		7,448.274	\$158.650		83415	1	552,729	0,000	0.000	-21.55%	-42.37%	\$2.94	-17.13%
N	809	INLS	Vehicles and Equipment Diesel	t Diesel	1,000 Gallons	2010 1	53.914		7,440,132	\$142.758		83415	4	552.125	0.000	0.000	-0.11%	-11.13%	\$2.65	-11.01%
N.	809	INL-S	Vehicles and Equipment Diesel	1 Diesel	1,000 Gallons	2011 1	58,724		8,103.912	\$226,043		83415	1	601.383	0.000	0.000	8.19%	36.84%	\$3.85	31,21%

DALEY OND CERRAL SPATIALE 12 Energy & Water (603)

PSO Site#	Site												The same of the same of						
		Category	Subcategary	Usage Unit	D Ad	QTR US	Usage Amount	BTU x 10^6	Cost (1,000 S)	Cost (1,000 S) Additioned Information	Main Site Zip Code	Scope	Anthropogenic MtCO ₂ e	Biogenic MrCO ₂ e	Scope 3 - T&D Loss, MtCO ₂ e	Usage % Change	Cost % Change	STUBIL	S/Unit
603	INI-8	Vehicles and Equipment Diesel	las	1,000 Gallons	2003 2	3.178		438.564	\$5,103		83415	-	32.545	0.000	0.000			19718	
603	NL-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2004 2	10.617		1,465.146	\$17,008		83415	1	108.727	0.000	0.000	70.07%	70,00%	\$1.60	-0.24%
603	INI-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2005 2	18,327		2,529,126	\$25,427		83415	1	187,684	0.000	0.000	42.07%	33,11%	\$1.39	-15.46%
603	NL-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2 9002	41.377		5,710.026	\$79,407		83415	1	423.735	0.000	0.000	55.71%	67.98%	\$1.92	27,71%
603	INI-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2 7002	41.175		5,682.150	\$81.837		83415	1	421.667	0.000	0.000	-0.49%	2.97%	\$1.99	3,44%
603	INL-8	Vehicles and Equipment Diesel	sel	1,000 Gallons	2008 2	69.785			\$240,116		83415	1		0.000			65.92%	\$3.44	42,24%
603	INL-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2009 2	106:09			\$133,332		83415	1	E	0,000	0.000	-14.59%	-80.09%	\$2.19	-57.16%
603	INI-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2010 2	62.970		098'689'8	8175.713		83415	-	644.866	0.000	0.000		24.1295	\$2.79	21.54%
603	INL-8	Vehicles and Equipment Diesel	sel	1,000 Gallons	2011 2	46.397	1	6,402,786	\$171,165		83415	1	475,144	0.000	0.000	-35.72%	-2.6690	\$3.69	24.36%
603	INT-S	Vehicles and Equipment Diese	sel	1,000 Gallons	2003 3	6.086			\$5,995		83415	1		0.000	0.000			\$0.99	
603	INI-8	Vehicles and Equipment Diesel	les	1,000 Gallons	2004 3	18.662		2,575,356	\$34,331		83415	1	191,115	0.000	0,000	67.39%	82.54%	\$1.84	46.45%
603	INL-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2005 3	37.050		5,112,900	\$67.373		83415	-	10	0.000	0.000	49.63%	49.04%	\$1.82	-1.17%
603	INL-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2006 3	36.384			\$80.842		83415	1		0.000			16.66%	\$2.22	18.16%
603	INL-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2007 3	40.381		5,572,578	\$112,743		83415	-		0.000		9.906.6	28.30%	\$2.79	20.42%
603	INL-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2008 3	47.580	C	6,566,040	\$200.026	*	83415	1	487,259	0.000	0.000	15,13%	43.64%	\$4.20	33.59%
603	INL-8	Vehicles and Equipment Diesel	sel	1,000 Gallons	2009 3	55.260		7,625.880	\$120,476		83415	1	565,909	0.000	0,000		-66.03%	\$2.18	-92.83%
603	INL-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2010 3	33,385		4,607,130	\$88.470		83415	1	341.891	0.000	0.000	-65.52%	-36.18%	\$2.65	17.73%
603	INI.S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2011 3	39.784		5,490.192	\$155,308		83415	1	407.422	0.000	0.000		43.049a	\$3.90	32.12%
603	INIS	Vehicles and Equipment Diesel	sel	1,000 Gallons	2003 4	0.990		136,620	\$0.146		83415	1	10.138	0.000	0.000			\$0.15	
603	INL-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2001 4	14,689		2,027,082	\$20.219		83415	1	150.428	0.000	0.000	93,26%	99.28%	\$1.38	89.29%
603	INL-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2005 4	21.408		2,954,304	\$49.066		83415	-	219.236	0.000	0,000	31.39%	58.79%	\$2.29	39.94%
603	PAL-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2006 4	33.283	4	4,593,054	\$72.890		83415	-	340,846	0.000			32.68%	\$2.19	-4.65%
603	INL-8	Vehicles and Equipment Diesel	sel	1,000 Gallons	2007 4	51.586		7,118.868	\$149,315		83415	-		0.000	0.000	35.48%	51.18%	\$2.89	24.34%
603	INL-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2008 4	49.272		6,799,536	\$207.628		83415	1	504,587	0.000	0.000	4,70%	28,09%	\$4.21	31.31%
603	NI-S	Vehicles and Equipment Diesel	sel	1,000 Gallons	2009 4	55.203		7,618.014	\$137,478		83415	1	565.325	0.000	0.000	10,74%	-51.03%	\$2.49	-69.21%
603	INLS	Vehicles and Equipment Diesel	sel	1,000 Gallons	2010 4	46.891		6,470,958	\$136,008		83415	1		0.000		ŀ	-1.08%	\$2.90	14.14%
603	INLS	Vehicles and Equipment Diesel	les	1,000 Gallons	2011 4	65.828		9,084,261	\$249,164		83415	1	674,134	0.000	0.000	28,77%	45.41%	\$3.79	23.37%
603	INL-S	Vehicles and Equipment Gasoline	soline	1,000 Gallons	2003 1	1.277		139.625	\$1.740		83415	1	11.249	0.000	0.000			\$1.36	
603	NL-S	Vehicles and Equipment Gasoline	soline	1,000 Gallons	2004 1	0.865		108,125	\$4.921		83415	1	6197	0.000		-47.63%	64.64%	\$5.69	76.05%
603	INL-S	Vehicles and Equipment Gasoline	soline	1,000 Gallons	2005 I	1.041			\$1.907	9	83415	I	9,170	0.000		16.91%	-158.05%	\$1.83	-210,55%
603	INIS	Vehicles and Equipment Gas	Gasoline	1,000 Gallons	2006 1	5.520			\$11.692		83415	1		0.000		N	83.69%	\$2.12	13.51%
603	INI-S	Vehicles and Equipment Gasoline	soline	1,000 Gallons	1 2002	5.289		661.125	\$11.805		83415	1	46.589	0.000	0.000	-4.37%	%960	\$2.23	5.10%
603	INI-S	Vehicles and Equipment Gass	Gasoline	1,000 Gallons	2008 1	7.690		961,250	\$21.576		83415	T	67.738	0.000	0.000	31.22%	45.29%	\$2.81	20.45%
603	INI-S	Vehicles and Equipment Gast	Gasoline	1,000 Gallons	2009 I	6.893		861.625	\$14.349		83415	1	60.718	0.000	0,000	-11.56%	-50.37%	\$2.08	-34.78%
603	INI-S	Vehicles and Equipment Gasoline	soline	1,000 Gallons	2010 1	5.542		692,750	\$13.507		83415	1	48,817	0.000	0.000	-24.38%	-6.23%	\$2.44	14.59%
603	INL-S	Vehicles and Equipment Gasoline	poline	1,000 Gallons	2011 1	\$.169		646,125	\$13,693		83415	,	45.532	0.000	0.000	-7.22%	1.36%	\$2.65	8.00%
603	INIS	Vehicles and Equipment Gas	Gasoline	1.000 Gallons	2003 2	0.682		85.250	\$1.029		83413	-	7002	0.000	0.000			\$1.51	
603	NI-S	Vehicles and Equipment Gas	Gasoline	1,000 Gallons	2004 2	1.174		146,750	\$1.890		83415	1	10.341	0.000	0.000	41.91%	45.56%	19.18	6.2869
603	INL-S	Vehicles and Equipment Gasoline	soline	1,000 Gallons	2005 2	4.256			\$7.545		83415	1		0.000			74.95%	51.77	96116
603	INI-S	Vehicles and Equipment Gasoline	soline	1,000 Gallons	2006 2	3.318		414,750	\$7,135		83415	1	29,227	0.000	0.000		-5,75%	\$2.15	17.56%
603	INL-S	Vehicles and Equipment Gasoline	soline	1,000 Gallons	2007 2	4.161		Ĭ	\$8.942		83415	-	Î	0.000	0.000		20.21%	\$2.15	-0.06%

H					Energy Consumption and Cost	aption an	d Cost						E.	Estimated GHG Emissions	: Emissions			Quality	Quality Control	
PSO	Site #	Site	Category	Salicategory	Usage Unit	È	QIR Us	Usage Amount	BTUX 10'6	Cost (1,000 S)	Additional Information	Main Site Zip Code	Scope	Anthrop ogenic MtCO ₂ e	Biogenic MicO ₂ e	Scope 3 - T&D Lass, McCO2e	Usage % Change	Cost. % Change	Sythait	\$/Unit
NE	603	INT-S	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2008 2	9.315		1,164.375	\$27,015		83415	l a	82,052	0.000	0.000	55.33%	66.90%	\$2.90	25,90%
NE	603	INLS	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2009 2	7,081		885.125	\$11.111		83415	F -1	62,374	0.000	0.000	31.55%	-143,149%	\$1.57	-84.83%
NE	E09	INLS	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2010 2	7,699	100	962.375	\$20.211		83415	1	67.818	0.000	0.000	8.03%	45.02%	\$2,63	40.23%
NE	603	INLS	Vehicles and Equipment Casoline	Casoline	1,000 Gallons	2011 2	5.646	16	705,750	\$17.088		83415	4	49.733	0.000	0.000	-36,36%	-18.28%	\$3.03	13,26%
NE	603	INI-S	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2003 3	1.219		152,375	\$1,752		83415	1.	10,738	0.000	0.000			\$1.44	
NE.	603	INL-S	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2004 3	1119		139.875	\$2.073		83415	1 0	9.857	0.000	0.000	-8.94%	15.4891	\$1.85	22,42%
NE	603	INL-S	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2005 3	1 4.713		589.125	\$10.108		834(5	1	41.515	0.000	0.000	76.269%	79.49%	\$2.14	13.629h
NE	603	INL-S	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2006 3	5.488		000.989	\$14.307		83415		18,342	0:000	0.000	14.12%	29.35%	\$2.61	17,73%
艺	603	INL-S	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2007 3	\$ 559		694.875	\$16.342		83415	1	48.967	0.000	0.000	1.28%	12.45%	\$2.94	11.32%
翌	E09	INLS	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallone	2008 3	5.549		693,625	\$19,953		83415	1	48.879	0.000	0.000	-0.18%	18.10%	\$3.60	18,24%
NE	209	DNL-S	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2009 3	7,218		902.250	\$15.423		83415	-	63.581	0.000	0.000	23.12%	-29.37%	\$2.14	-68.28%
豆	603	INLS	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2010 3	6.708		838.500	\$19.169		83415		59,088	0,000	0.000	-7.60%	19.54%	\$2.86	25,23%
艺	603	INL-S	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2011 3	5.923		740.375	\$21.194		83415	1	52,173	0.000	0000	-13.25%	9.550,6	\$3.58	20,14%
N	603	INLS	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2003 4	00000		0.000	\$0.000		83415	1	0.000	0.000	0.000			#DIV/0!	
見	603	INLS	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2004 4	1.587		198.375	\$2.845		83415	-	13.979	0.000	0.000	100.00%	100.00%	\$1.79	#DIV/0!
N	503	INL-S	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2002	3.948		493,500	\$9,432		83415	1	34.776	0.000	0.000	59.80%	69.84%u	\$2.39	24.96%
NE	603	INLS	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2006 4	5.494		686.750	\$14.760		83415	1	48,395	0.000	0.000	28.14%	36.10%	\$2.69	11.07%
NE	209	INI-S	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2007 4	7.106		888.150	\$19.731		83415	1	62.594	0.000	0.000	22.69%	25.19%	\$2.78	3.24%
N.	603	INL-S	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2008 4	7.743	8	967.875	\$29.306		83415	1 (68,203	0.000	0.000	8.23%	32.67%	\$3.78	26.64%
NE	603	INI-S	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2009	9.148		1,143,500	\$22.388		83415	1	80.581	0.000	0.000	15.36%	-30.90%	\$2.45	-54.65%
見	603	INI-S	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2010	9.072		1,134,000	\$23.908		83415	_	79,912	0.000	0.000	-0.84%	6.36%	\$2.64	7,14%
見	603	INLS	Vehicles and Equipment Gasoline	Gasoline	1,000 Gallons	2011	6.529		816.125	\$23.177		83415		57.512	0.000		-38,95%a	-3.15%	\$3.55	25.76%
型	209	NL-S	Vehicles and Equipment LPG	Dd	1,000 Gallons	2003	0.232		21.344	\$0.205		83415	9	1.350	0.000	0000			\$0.88	
翌	E09	INL-S	Vehicles and Equipment LPG	LPG	1,000 Gallons	2004	0.568	-	52.256	\$0.545		83415	1	3.304	0,000	0.000	9651'65	62.39Pa	96.08	7,91%
NE	603	INLS	Vehicles and Equipment LPG	LPG .	1,000 Gallons	2005	0.216		19.872	\$0,254		83415	1 1	1,256	0.000	0.000	-162,96%	-114.57%	\$1.18	18.40%
皇	603	INLS	Vehicles and Equipment LPG	CPG	1,000 Gallons	2006 1	0.309	100	28.428	\$0,449		83415	1	1,797	0,000	0.000	307086	43,43%	\$1.45	19.07%
NE	603	INL-S	Vehicles and Equipment LPG	DdT	1,000 Gallons	7002	0.000		0.000	\$0,000		83415	1	0.000	0.000	0.000	#DIV/01	#DIV/01	#DIV/0!	#DIV/01
NE	209	INL-S	Vehicles and Equipment LPG	LPG	1,000 Gallons	2008	0.184	.65	16,928	\$0,453		83415	D 0	1,070	0.000	0.000	100:00%	100,00%	\$2.46	//DIN/02
NE	603	INL-S	Vehicles and Equipment LPG	Dan	1,000 Gallons	2069	0.289		26.588	\$0.658		83415	100	1.681	0:000	0.000	36.33%	31,16%	\$2.28	-8,13%
NE	209	INL-S	Vehicles and Equipment LPG	Ddi	1,000 Gallons	2010 1	0.173		15.916	\$0,283		83415	3.0	1.006	0.000	0.000	-67,059a	+132,51%	\$1.64	-39.18%
NE.	209	INL-S	Vehicles and Equipment LPG	Dd7	1,600 Gallons	2011	0.122	Í	11.224	\$6,309		83415	1	0.710	0.000	0.000	41,80%	8,41%	\$2.53	35,41%
NE	603	INL-S	Vehicles and Equipment LPG	Ddi	1,000 Gallons	2003 2	0.178		16,376	\$0,190		83415	1	1.035	0.000	0.000			\$1.07	
NE	603	INLS	Vehicles and Equipment LPG	CPG	1,000 Gallons	2004 2	0.453		41.676	\$1.890		83415	1	2.635	0.000	0.000	60.71%	9656.68	\$4.17	74,42%
NE	603	INL-S	Vehicles and Equipment LPG	LPG	1,000 Gallons	2005 2	0.254		23.368	\$0.037		83415	1	1.478	0.000	0.000	-78,359a	-5008.11%	\$0.15	-2764.1596
N	209	INL-S	Vehicles and Equipment LPG	DAT	1,000 Gallons	2006 2	0.130		11.960	\$0.200		83415	1	0.756	0.000	0.000	-95,38%	81.50%	\$1.54	90,53%
男	603	INL-S	Vehicles and Equipment LPG	Ddi	1,000 Gallons	2007 2	1.574		144.808	\$3,563		83415	1	9,156	0.000	0.000	91.74%	94.39%	\$2.26	32,04%
翌	203	INL-S	Vehicles and Equipment LPG	LPG .	1,000 Gallons	2008 2	0.520		47.840	\$1,216		83415	-	3.025	0.000	0.000	-202.69%	-193.01%	\$2.34	3.20%
NE	209	INL-S	Vehicles and Equipment LPG	LPG.	1,000 Gallons	2009 2	0.188		17.296	\$6.399		83415	-	1.094	0.000	0.000	-176,60%	-204.76%	\$2.12	-10.18%
NE	603	INL-S	Vehicles and Equipment LPG	Dd7	1,000 Gallone	2010 2	2 0.145		13.340	\$0.299		83415	1.	0.843	0,000	0.000	-29,66%	-33,44%	\$2.06	-2,92%
NE	603	INL-S	Vehicles and Equipment LPG	LPG	1,000 Gallons	2011 2	971.0		16.192	\$0.509		83415	12	1.024	0.000	0.000	17.61%	41.26%	\$2.89	28.70%
型	603	INLS	Vehicles and Equipment 1PG	LPG	1,000 Gallons	2003 3	0.331		30,452	\$0.354		83415	1	1.925	0.000	0.000			\$1.07	

DR. 57 2012 (EDR.12-7-11 size 3.2 Emery & Ware (603) 1/17/20123 20 DM.

PSO	Site #	Site	Category	Subcategory	Usage Unit	F	QIR	Usage Amount	BTUx 10^6	Cost (1,000.5)	Additional Information	Main Site Zip Code	Scope	Anthropogenic MrCO ₂ e	Blogenic MrCO ₂ e	Scope 3 T&D Loss, MtCO2e	Usage % Change	Cost 46 Change	\$/Dulit	\$/Unit % Change
NE 6	603 I	INL-S	Vehicles and Equipment LPG	9	1,000 Gallons	2004 3			20.240	\$0,000		83415	+	1.280	0:000	0.000	-50,45%	#DIV/0!	\$0.00	#DIV/0!
NE 6	603 I	NL-8	Vehicles and Equipment LPG	9	L,000 Gallons	2005 3	ĥ	0.339 3	31.188	\$0,385		83115	T.	1.972	0.000	0.000	35.10%	9600.001	\$1.14	100,00%
NE 6	E03 I	INL-S	Vehicles and Equipment LPG	9	1,000 Gallons	2006 3		0.250 2	23.000	\$0.382		83415	1	1.454	0.000	0.000	-35,60%a	-0.79%	\$1.53	25.67%
NE 6	E03 I	INL-S	Vehicles and Equipment LPG	Ď,	1,000 Gallons	2007 3	H	8 772.0	53.084	\$1.137		83415	1	3.356	0:000	0.000	56.67%	66,40%	\$1.97	22,46%
NE 6	603 I	INL-S	Vehicles and Equipment LPG	9	1,000 Gallons	2008 3		1,911	175.812	\$4,416		83415	-	11,116	0,000	0.000	9618.69	74,2596	\$2.31	14,73%
NE 6	E03 I	INI-S	Vehicles and Equipment LPG	9	1,000 Gallons	2009 3		0.152	13.984	\$0.284		83415	-	0.884	0.000	0.000	-1157,24%	-1454.93%	\$1.87	-23.58%
NE 6	E09 I	INL-S	Vehicles and Equipment LPG	0	1,000 Gallons	2010 3		0,130	11,960	\$0.258		8341.5	-	0,756	0.000	0.000	-16.92%	-10.08%a	86.18	5.85%
NE 6	E09	INL-S	Vehicles and Equipment LPG	9	1,000 Gallons	2011 3		0.000	0.000	80.000		83415	-	0.000	0.000	0.000	//DIN//01	#DIV/0!	10/AIG#	#DIV/0!
N N	603 I	INL-S	Vehicles and Equipment LPG	Ö	1,000 Gallons	2003 4	0		0.000	\$0.000		83415	-	0.000	0.000				WDIV/02	
NE 6	E03 I	INL-8	Vehicles and Equipment LPG	Ç	1,000 Gallons	2004 4		0,403 3	37,076	\$0.387		83415	-	2.344	0,000	0.000	100.00%	100.00%	\$0.96	#DIV/0!
NE 6	E03 I	INI-S	Vehicles and Equipment LPG	Ç	1,000 Gallons	2005 4		161.0	17.572	\$6.220		83415	-	UII	0.000	0.000	-110.99%	-75.91%	\$1.15	16.63%
NE 6	603 I	INL-S	Vehicles and Equipment LPG	9	1,000 Gallons	2006 4		0.228 2	20.976	\$0.335		83415	-	1.326	0,000	0,000	16.23%	34.33%	\$1.47	21.61%
NE 6	603 I	INI-S	Vehicles and Equipment LPG	D	1.000 Gallons	2007 4		7	2.852	\$0.069		83415	-	0.180	0.000	0.000	-635,48%	-385.51%	\$2.23	33.99%
NE 6	E03 T	INL-S	Vehicles and Equipment LPG	Q	1,000 Gallons	2008 4		4 0.489	44.988	\$1.261		83415	1.	2.845	0.000	0.000	93.66%	94,53%	\$2.58	13.69%
NE 6	E03 I	NI-8	Vehicles and Equipment LPG	Q	1,000 Gallons	2009 4		Ĭ	9.568	\$0.197		83415	4	0.605	0.000	0.000	-370.19%	-540.10%	\$1.89	-36,14%
NE 6	E03 I	INL-S	Vehicles and Equipment LPG	9	1,000 Gallons	2010 4		0.110	10.120	\$0,266		83415	-	0.640	0.000	0.000	5,45%	25.94%	\$2.42	21.67%
NE 6	E03 I	INL-S	Vehicles and Equipment LPG	9	1,000 Gallons	2011 4		0.000	0.000	50.000		83415	-	0.000	0.000	0.000	#DIV/0!	#DIV/0t	#DIV/0!	#DIV/0!
NE 6	E03 I	INL-S	Vehicles and Equipment Other	ber	Billion BTUs	2006 3		36.384 3	36,384:000	\$80.842		83415	1	0.000	0.000	0.000	100.00%	100.00%	\$2.22	#DIA/01
NE 6	1 809	INIS	Vehicles and Equipment Other	her	Billion BTUs	2003 4		0.000	0:000	\$0.000		83415	-	0.000	0.000	0.000			#DIV/0!	
NE 6	603 I	INL-S	Vehicles and Equipment Other	her	Billion BTUs	2004 4		0.000 0	0.000	\$0.000		83415	-	0.000	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0	#DIA/0;
NE 6	603 1	INL-S	Water Aq	Aquifer Replenish	Million Gallons	2007	0	0000		\$0.000		83415	NA	0,000	0.000	0.000			#DIV/0!	
9 世	E03 I	NL-S	Water Aq	Aquifer Replenish	Million Gallons	2008 1	0	0.000		\$0.000		83415	NA	0,000	0,000	0.000	#DIV/01	#DIV/0t	#DIV/01	#DIV/0!
NE 6	1 609	INL-S	Water Aq	Aquiter Replenish	Million Gallons	2009 1	0	0.000		20.000		83415	NA	0.000	0.000	0.000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
NE 6	E03 I	INI-8	0.5	Aquifer Replenish	Million Gallons	2010 1		00070		\$6.000		83415	NA	0.000	0.000	0.000	#DIV/0!	#DIA/0[#DIV/0	#DIV/0t
NE 6	E03 I	INL-S	Water Aq	Aquifer Replenish	Million Gallons	2011 1	.0	0.000		000'05		83415	NA	0.000	0.000	0.000	#DIV/0!	#DIV/0I	#DIV/0!	#DIA/01
NE 6	E03 I	INL-S	Water Aq	Aquifer Replenish	Million Gallons	2007 2		0.000		20.000		83415	NA	0.000	0,000	0.000			#DIV/0!	
NE 6	603 I	INL-S	Water Aq	Aquifer Replenish	Million Gallons	2008 2	1.5	0,000		80.000		83415	NA	0.000	0.000	0.000	#DIV/0f	#DIV/0!	#DIV/0?	#DIV/0!
NE 6	E03 I	INL-S	Water Aq	Aquifer Replenish	Million Gallons	2 6002		0,000		\$0.000		83415	NA	0.000	0.000	0.000	#DIV/0!	#DIV/0;	#DIV/0!	#DIV/0!
NE 6	E03 I	INL-8	Water Aq	Aquifer Replenish	Million Gallons	2010 2		00000		20,000		83415	NA	0.000	0.000	0:000	#DIV/0[#DIV/0	#DIV/0!	#DIV/0!
NE 6	1 509	INL-S	Water Aq	Aquifer Replenish	Million Gallons	2011 2		0.000		000.02		83415	NA	0.000	0.000	0.000	#DIV/0!	#DIV/0f	#DIV/0!	#DIV/0!
NE 6	603 I	INIS	Water Aq	Aquifer Replenish	Million Gallons	2007 3		0:000		80.000		83415	NA	0.000	0:000	0.000			WDIV/0!	
NE 6	E03 I	INL-S	Water Aq	Aquifer Replenish	Million Gallons	2008 3		0,000		000'03		83415	NA	0.000	0.000	0.000	#DIA/01	#DIV/0f	#DIV/0!	#DIV/0!
NE 6	1 809	INL-S	Water Aq	Aquifer Replenish	Million Gallons	2009 3		0.000		\$0.000		83415	NA	0.000	0.000	0.000	#DIA/00	#DIA/0i	#DIA/0!	#DIV/0!
9 田	603 T	INL-S	Water Aq	Aquifer Replenish	Million Gallons	2010 3	0	0,000		\$6,000		83415	NA	0.000	0.000	0.000	#DIV/0!	#DIV/0t	#DIV/0!	#DIA/0i
NE 6	603	INL-S	Water Aq	Aquifer Replenish	Million Gallons	2011 3	0	0.000		\$0,000		83415	NA	0.000	0.000	0.000	//DIV/0!	70/AIG#	//DIV/0!	#DIV/0!
NE 6	E03 I	INL-S	Water Aq	Aquifer Replenish	Million Gallons	2007 4		0.000		80.000		83415	NA	0.000	0.000	0.000			#DIV/0!	
NE 6	E03 I	INI-8	Water Aq	Aquifer Replenish	Million Gallons	2008 4		0.000		80.000		83415	NA	0.000	0.000	0,000	#DIV/0!	#DIV/01	#DIV/0I	#DIV/0!
NE 6	603 I	INL-S		Aquiter Replenish	Million Gallons	2009 4		0.000		\$6.000		83415	NA	0.000	0.000	0.000	#DIV/0!	#DIV/0f	#DIA/0i	#DIV/0!
				Aquifer Replenish	Million Gallons	2010 4		0.000		\$0.000		83415	NA	0.000	0.000		#DIV/0!	#DIA/01	#DIV/0!	#DIA/0i
				Aquifer Replenish	Million Gallons	2011 4		0.000		59.000		83415	NA	0.000	0.000	0.000	#DIV/0f	#DIV/0!	#DIV/0!	#DIV/0!
NE 6	-																			

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PSO Site was Site												200000000000000000000000000000000000000		The second	Blueenic	Connet TAD		100		- ALESTON
INL-S Water Potable Militor Gallons 2009 1 203.833 \$124.123 \$814.123 83415 NA INL-S Water Potable Militor Gallons 2010 1 1266.13 \$177.699 83415 NA RUL-S Water Potable Million Gallons 2010 1 1796.17 \$125.714 83415 NA RUL-S Water Potable Million Gallons 2007 2 234.42 \$125.14 8415 NA RUL-S Water Potable Million Gallons 2010 2 197.093 \$124.932 83415 NA RUL-S Water Potable Million Gallons 2010 2 197.093 \$151.932 83415 NA RUL-S Water Potable Million Gallons 2010 2 197.093 \$159.093 83415 NA RUL-S Water Potable Million Gallons 2010 2 197.993 8137.993 <t< th=""><th></th><th></th><th></th><th>Subcategory</th><th>Usage Unit</th><th></th><th></th><th>Usage Amount</th><th>BTU x 10'6</th><th>Cast (1,000 5)</th><th>Additional Information</th><th></th><th></th><th></th><th>MICOse</th><th>Last, MtCO.e</th><th>% Change</th><th>% Change</th><th>Strink</th><th>S/Unit</th></t<>				Subcategory	Usage Unit			Usage Amount	BTU x 10'6	Cast (1,000 5)	Additional Information				MICOse	Last, MtCO.e	% Change	% Change	Strink	S/Unit
INL-S Water Potable Afflicar Gallone 2010 1 206-173 \$177,699 \$1415 NA INL-S Water Potable Million Gallone 2001 1 179-677 \$129-714 \$139-714 \$1415 NA INL-S Water Potable Million Gallone 2007 2 147-032 \$121-044 \$121-044 \$1415 NA INL-S Water Potable Million Gallone 2007 2 17-032 \$151-064 \$2415 NA INL-S Water Potable Million Gallone 2001 2 17-032 \$154-052 \$154-052 \$2415 NA INL-S Water Potable Million Gallone 2001 2 17-032 \$154-052 \$154-052 \$2415 NA INL-S Water Potable Million Gallone 2001 2 17-032 \$152-053 \$2415 NA INL-S Water Potable Million Gallone 2001	99			Potable	1,071	2009 1	20	13,833		\$124,125		83415	N'A	0.000	0:000	0.000	-20,90%	-3.68%	19:0\$	14.25%
INL-S Water Potable Million Gallons 2011 1 179.627 \$206.620 83415 NA INL-S Water Potable Million Gallons 2007 2 230.427 \$129.714 8415 NA INL-S Water Potable Million Gallons 2009 2 197.093 \$121.684 83415 NA INL-S Water Potable Million Gallons 2001 2 179.82 \$124.932 83415 NA INL-S Water Potable Million Gallons 2011 2 149.791 \$129.105 83415 NA INL-S Water Potable Million Gallons 2001 2 149.791 \$129.475 83415 NA INL-S Water Potable Million Gallons 2007 2 247.965 \$143.729 83415 NA INL-S Water Potable Million Gallons 2007 3 241.543 \$143.729 83415	66.		В	Potnble	Million Gallons	2010 I	20	16,173		\$177,699			NA	0.000	0.000	0.000	1.13%	30,15%	\$0,86	29,35%
INL-S Water Potable Million Gallons 2007 2 234,47 \$129,714 \$8415 NA INL-S Water Potable Million Gallons 2010 2 197,093 \$131,684 84415 NA INL-S Water Potable Million Gallons 2010 2 197,092 \$154,932 83413 NA INL-S Water Potable Million Gallons 2010 2 149,791 \$152,043 83413 NA INL-S Water Potable Million Gallons 2007 3 247,965 \$121,977 83415 NA INL-S Water Potable Million Gallons 2007 3 241,545 \$143,729 83415 NA	19		1	Potable	Million Gallons	2011 1	13	79,627		\$206.020		83415	NA	0.000	0.000	0.000	-14.78%	13,75%	\$1.15	24.85%
INL-S Water Potable Adilion Gallons 200 2 197.093 \$151.684 \$83415 NA INL-S Water Potable Millen Gallons 2010 2 179.782 \$154.952 83415 NA INL-S Water Potable Millien Gallons 2001 2 179.782 \$159.103 83415 NA RL-S Water Potable Millien Gallons 2007 3 247.955 \$121.977 83415 NA RL-S Water Potable Multion Gallons 2007 3 241.545 \$1437.729 83415 NA	9			Potable	Million Gallons	2007 2	23	50,427		\$129,714		83415	NA	0.000	0.000	0.000	10.53%	-36.99%	\$0.56	-53.11%
PolL-8 Water Pomble Million Gallons 2010 2 179-782 \$154.932 \$3415 NA PlA-8 Water Pomble Million Gallons 2001 2 149.731 \$122.103 83415 NA RA-8 Water Pomble Million Gallons 2007 3 247.965 \$121,977 83415 NA RN-8 Water Pomble Million Gallons 2007 3 247.965 \$1437.97 83415 NA	99			Potable	Million Gallons			97,093		\$121.684			NA	0.000	0.000	0.000	8.869%	-69.31%	\$0.62	-85,77%
INL-S Water Ponable Million Gallons 2011 2 149.791 \$129.103 83415 NA INL-S Water Ponable Million Gallons 2007 3 247.955 \$121.977 83415 NA INL-S Water Ponable Million Gallons 2009 3 241.543 \$143.729 83415 NA	9		Ž.	Potable	Million Gallons			79.782		\$154,952			NA	0.000	0.000	0.000	-9.63%	21.47%	\$0.86	28,37%
DLL-S Water Potable Million Gallons 2007 3 247,955 \$121,977 \$3415 NA DNL-S Water Potable Million Gallons 2009 3 241,543 \$143,729 83415 NA	99			Potable	Million Gallons	2011 2	11	161.61		\$129,103			NA	0.000	0.000	0.000	-20.0296	-20.02%	\$0.86	0.00%
INI8 Water Potable Million Gallone 2009 3 241543 \$143,729 83415 NA	9			Potable	Million Gallons	2007 3	24	17,955		\$121,977			NA	0.000	0.000	0.000	27,49%	-27.03%	\$0.49	-75.20%
	69			Potuble	Million Gallons	2009 3	24	11.543		\$143,729			NA	0.000	0.000	0.000	37,99%.	10.18%	\$0.60	-44,84%
603 NN-S Water Potable Million Gallons 2010 3 193,882 \$159,516 83415 NA 0,000	19			Potable	Million Gallons	2010 3	61	93,682		\$139,516			NA	0.000	0.000	0.000	-24,719%	-3,02%	\$0,72	17.39%
603 INL-S Water Potable Million Callons 2011 3 212,099 \$223,496 83415 NA 0,000	99			Potable	Million Gallons	2011 3	2.1	12,099		\$223.496			NA	0.000	0,000	0,000	8,689's	37,58%	\$1.05	31.64%
603 INL-S Water Potable Million Gallons 2007 4 280,096 \$132,582 83413 NA 0,000	9	6		Potable	Million Gallons	2007 4	28	960'08		\$132,582	TI III		NA	0.000	0.000	0.000			\$0,47	
603 INI-S Water Potable Million Gallons 2009 4 272,818 \$159,481 83415 NA 0.000	68			Potable	Million Gallons	2009 4	23	71,818		\$159,481	100	83415	NA	0.000	0.000	0.000	-2,67%	16,87%	86.08	19.03%
603 INL-S Water Potable Million Gallbras 2010 4 222.763 \$220.356 83415 NA 0.000	. 60			Potable	Million Gallons	2010 4	22	22.763		\$200,356		83415	NA	0.000	0.000	0.000	-22.47%	20.40%	\$0.90	35.01%
NE 603 INL-S Water Potable Million Gallons 2011 4 311,776 \$196,563 83415 NA 0,000				Potable	Million Gallons	2011 4	3.1	92273		\$196.563				0.000	0.000	0.000	28.55%	-1.93%	\$0.63	-42.66%

DW, FT 2012 CEDR 13-7-11 nine F2 Edwyr & Water (602) 197/2012) 20 PM 70

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List of Operating On-Site Renewable Energy Systems

Requirement(s): EPAct 2005, DOE O 436.1, E.O. 13423, E.O. 13514

Source. Site/Lab FY 2011 CEDR (formerly known as the FY 2010 CEDR)

						Sys	System Information	ation					
PSO	Site #	PSO Site # Site	System Description Name	Location Description (i.e., building name, etc.)	System Year Location Installed (Zlp Code) (YYYY)	Year Installed (VVVV)	End Use Category	End Use Stiting Status - On Federal or % of RECS (Retained Or	On or Off Grid?	Does the sire own the T&D system that Scope Lor delivers the electricity? 2 System?	Scope 1 or 2 System?	Cenerator Nameplate m? Capacity (MW)
吳	209	INI-I	NE 602 INL-I Solar transpired wall	IF 663, Records Storage Facility, 83415 Idaho Falis	83415	2001	Goal Subject	2001 Goal Subject. On Federal Land. On User Site	100% Nc	100% Non-Electric	No Electricity is Delivered (Non-Electric) Scope 1	Scope 1	
NE	603	INLS	NE 603 INL-8 Solar franspired wall	MFC-774, ZFPR Support Wing, INL Desert Site MFC Area.	Jort Wing, 83415	2010	2010 Goal Subject S	On Federal Land, On User Site	100% No	100% Non-Electric	No Electricity is Delivered (Non-Electric) Scope 1	Scope 1	
NE	603	S-INI	NE 603 INL-S Solar transpired wall	MFC-682, MFC Muchine Shop, 83415 2010 Goal Subject Sin Int. Desert Site MFC Area,	83415	2010	Goal Subject	On Federal Land, On User Site	100% No	m-Electric	100% Non-Electric No Electricity is Delivered (Non-Electric) Scope 1	Scope 1	

	rivouchoux consumption amortination	The state of the s				COST		DIVILLE	Divinasa r dei muorinamon	nu.	
System Type/Category	Estimated Annual Renewable Electricity Output (MWh/Yr)	Estimated Annual Renewable Electricity Consumed (MWh/Yr)	Estimated Annual GHG Emissions Avoided (MICO ₂ eVr)	Estimated Annual Renewable Thermal Output (10°6 BTLIVP)	Estimated Annual Renewable Thermal Consumed (10°6 BTU/Yr)	Implementation Cost (5)	Principal Biomass Fuel Type	Principal Biomass Fuel Use (10^6 BTU/Yr)	Secondary/ Blend Fuel Type	Secondary/ Blend Fuel Use (10°6 BTUYr)	Fuel Costs (\$)
Solar Themtal (including water and space conditioning)	0000	0000	0.000	102.400	102.400						
Solar Thermal (including water and space conditioning)	0.000	0.000	0.000	259.8	259,8						ī
Solar Thermal (including water and space conditioning)	0.000	0.000	0.000	239.9	239.9			0			
1342-87 2012 02 DB 12-3-1 (342) 83 Operating of 24th RE										1384	58869.003

List of Purchased Renewable Energy

Remarkation, DOE 0.461, E.O. 1343, E.O. 13514

Institutions: Update the let of preclassed removable energy resources and address all rells highlighted in Fre addressed guidance see comments in row 0 of each column and Appendix C or the Site Sustainability Plan Caudines. On safe specialism and receive and address all rells highlighted in the light properties of responsible energy papers. The addressed in the letter of preclassed removables worksheet. Newly properties or petential on after cross-vable energy papers. Lond the Exists in the "Conservation & RE Measures" worksheet. Edited and new data cells should be lightlighted in light hine.

Samare Sales Lab PY 2011 CEDR (thorouthy known as the PY 2010 CEDR)

			Purc	Purchase Information	afion					Col	Consumption Information	ilon	Cost			Вюшая	Blomass Fuel Information	1011	
0	1850 Site # Site	ite Type if Renewable Energy Purchased	System Type/Category		Source Service Purchase Location Year Vear Codes (PAY) (PY)	Vear (0'Y)	End Use Category	Purchase Term	Siting Status On Federal or Indian Land?	Fotal Renewable Electricity Purchased (MWh/Er)	Estimated Annual GHC Emissions Avoided (AECO-e-Yr)	Total Renewable Thermal Purchased (10°6 BIUTO	Amenal Cast 1	Incremental Cost (5)	Incremental Perioripal Biomass Dismass Parel Secondary III Cost (5) Food Type Cise (10) 6 Food Type III (10) 6	Principal Biomass Fuel Use (10°6 BITU/Ar)	Secondary Blend Fuel Type	Secondary Blend Fuel Use F (10°6 BTU/Yr)	'ued Casts (\$
3	12/683 INT.	Renewable Energy Credit	Wind	0.585	2	011 (0	Goal Subject	Short-Term (5 10)		16,900,000	15,331,747		14,365,00						
100	602/603 INL	Renewable Energy Credit	Wind	66666	Ca	010	Gord Subject	Short Term (< 10)		15,915,520	11,490,065		\$ 16,393.00	4.55				il.	4
8	S02/603 INL	Renewable Energy Credit	Other	66666	7	2009 G	Goal Subject	Short Term (£ 10)		6,920,000	4,991 483		00:026'9 5						
9	02/603 INL	Renewable Energy Credit	Wind	19692	,Fil.	900	Goal Subject	Short-Term (\$10)		6,600,000	3,356,081		18,678.00						
3	302/603 ENL	Renewable finergy Credit	Bloumes	31323	2	OUT C	Goal Subject	Short Term (< 10)		6,800,000	5,262,486	9	19924.00					-	

NELFY 2013 CEDR 127 11 Mar 34 Puriment RE 11870127 STAIN

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Conservation and Renewable Energy Measures List

Examination (1985), 2017, DOE 0-456; I.

International and a constraint and a state that the control of the state of the s

						Measure-Project Description									Fund	Funding Overview	1
(9)	(c) (d)	(e)	(i)	(3)	(9)	0	0)	(6)	0	(u) (u)	n)	(0)	(6)	(6)	(0)	(6)	(i)
	ном	Has this measure been included in an official DOE budge requests? If yes, provide Freject/Measure #	Site Project #	Conservation Messure(s) Status	Conservation Measure(s) Type	Conservation Moreuwski) Nume or Description	Measure(s) Location (Zip Code)	End Use Cutegory tes	Do ym m. need cond rechnical H assistance? requ	Dues the measure If yes to HPSB, contribute to provide FIMS Property requirements Sequence#		to the m of ed mee?	forty opposed of created and to	Interior (Interior (Interi	A STATE OF THE PARTY OF THE PAR	Minaura Completion Year (Anticipated or Artual	Estimated Service Life
603 INI	DIL-S NE-0603-0005		ECM-001	Operational		D.C. ESP.C Project #2 MPC - Lighting Improvements	83415	Goal Subject - Covered 184	Yez	DIL MFC	C Yes	Yes	ESPC		100%	2010	25.0
			ECM-402		Boiler Plant Improvements	BAL ESPC Project #2 MFC - Boiler Flant Improvements						Yes	ESD				25.0
	1		ECM-003			Dill ESPO Project #2 MFC - Compressed Air Improvements		Goal Subject - Covered No.				Yes	ESPC				25.0
-1	1	5	ECM-104		Energy Related Process	Dit. ESPC Project #2 MFC - Dignal EMS Controls	83415	Goal Subject - Covered 14s		DEL MEC		Yre	ESPC				0.52
603 IM 607 IM	DHL-S 14E-0603-0009 DHL-S NE-0603-0016		ECM-005 BEA	Operational	Solar Thermal (including water Advanced Metering Systems	Solar Thermal (including water DL, ESPC by open #2 MFC - Solar Thermal Transced Walts (2) Advanced Meterna Systems — Meterna for EPSB Can didutes	83415	Goal Subject - Covered No.	Yes	21 Facility	BIL MFC No 21 Facilities in icNo	Yes	ESPC	Darect	100%	2011	25.0
100			BEA	Cyaratrons							E A	316	348			VE. SI	N O
603. DE	D.ES EM-0603-0013		CWI	Operational	Water and Sewer Conservation	DITEC CPP-606 Water and Sewer Constryation Systems	83415	Goal Subject + Covered 18s	No.	DE DITEC	EC Yes	Yes	Other		100%	2010	25.0
10 Deg	DU.1	350	379 FY-12 #1	Awarded/Approved		BE. Applied E&D for Project Decel opment (Sumanability	83415	Goal Subject - Covered No	Tes	III.	Ho	Yes	36.80	M&R Indirect	100%	2012	MA
502 1572	177	Ne	32F FY-12 #2	AwadedAmorred	Chiller Plant Improvements	DO NOT OUT TO SERVICE THE	83415	Goal Subrect - Cavered Ma-	Yer	TF-616/617	17. Yes	Yes	3686	M&R Indeed	100%	2012	13.6
	77	QT.	SEE FY-12#3		ing, and Arr	Bill EROB COO Centrals				IF-4554		Yes	1683				30.00
Ш	1.1		SEPT-114		Constitution a	DR WCB Water Fixture Replacements	j				Dio.	140	MA				30.0
	Tr.		SEE PY-12-65		H Construction			Goal Sabject - Corered Ro	Yes			No	168			2012	3000
602 DAL-	171	No	SIFFT-1246			D.C. W.C.B. Light Frankers	Ä	Goal Subject - Coverned 119			d	No	MA	MARK Indirect			25.0
605 BIT	17			Awarded Appropries	Legating Insperventured	DA WAS Lighting Custrells	21715	God Satisfact - Covered Was		TE-&144817		147	MA		1000	2012	22.0
LINE 203		No	SE FY-12.89		· Personal's	D.C. T. Coll Esternal Linkship			Yes		Ne	Mo	300				25.0
ш	DAT.1		SEP\$1.12#10		ves	Bit IEC Meters/Controls					Tes	Yes	Ma	П			350
	INT-S : NE-0503-0014		BEA			Dil. ESPO Project #3 CFA, ATR Complex and SMC		pa	Yes	DIL CFA, ATR	100	Ter	ESPC				25.0
603 DEC	DE-S	270	DES.	Ventied		ATR Back Up Churston Set Replanning	27415	Excluded Covered No.		Commercial and		Tra	DISE			2014	200
2	1		CW1		g. v milialing, and agr	HATEL CITATES HAVE UPBRAN		com pagace - novered are	101	130 130			cytoe		0.00		0.0
100	DILAS		AMWIF			All Process Buildings at R WMC (AMWIR) Stutdown.		Goal Subject - Covered No.			Mo	/No	Desp				30A
603 DA	100.8	170	CWI	Identified	Ceher	All Fracers Buildings at RWMC4CWI) Shutdown	33415	Coal Subject - Covered 10s	319		240	140	Disp	Disponnes	0%.	2018	MA
109	DIL-S	17e	CMT	Menufied	Other	CPP-659 New Wate Calune Facility/Process Shutdown.	SMIS	Goal Subject - Covered No.	No		Ma	No	Dup	Duponnini (000	2015	HA
602 DEL	INC.4	Ne	BEA	Liberation	Building Automation	BAS System Installation and Programming	83415 0	God Sabjert - Covered No.	Yes	IE-606	Mo	TH.	168	M&E Indicate (099	2013	25.0
	DILS		BEA		d Atre	Energy and Water Unstrades - Variety Facilities (FY 2013)	1 2	Covered		THD	No	Yes	MEA				25.0
error ne	DE 1	N.	4	Distriction	100	Encountries of Wasse Channel for the State of Section 2 (1997)	31820	God School Courses	200	Tan	12.0	ě	13.00	Man To Green	700	2014	0 80
П	1.0		e de la companya de l		Conditioning (RVAC)	farmer of commercement and the same of the				2001	200	462	The state of the s	.			
ge) BC	34.5	N.		Identified		Energy and Water Opprades - Vancour Familiers (FY 2015)	23415	God Sabyert - Covered Mis	Ster	TRID	Ma	Yes	MAG	M&E Induser	200	2015	25.0
NI 509	D4L-S NE-0603-0001	**	BEA	Identified	Standard Metering Systems	UV. Strende Decrac and Water Meter Installations	8315	Goal Subject - Covered Ho	Yes	DE AU	No		ESPC		03%	2014	25.0
603 100	B.T.S. 14E-10603-f1002-B.		B EFA	Libentified	Water and Sewer Conservation . Systems	Conservation Water Leak Repair - CFA	2415	Chad Subject - Covered 164	25		Yes		Other	ľ	200	2011	25.0
603 DI	DAL-S NE-0603-0003	#	BEA	Lieuthei	Wind	Dil. On-Site Ward Farm Development - Site Development, Electrical Infrastructure, and NEPA Documentation only	RMIS		82		No		Other		7900	2012	25.0
503 IM	D.C.S NE-0603-0004	18	BEA	Identified	Solar Photovoltae	DR. Os-Ste Solar Array Development and Installation	83415		150				Other		000	1100	25.0

BU, PY 2012/SEDR 137/AI star 3.3 Commension & RE-Members 1/1/6/04/212/12/EM

For measure that it is prove on any difficiency, provide estim ated one in graved for each energy type, as application of the area of th	efficiency, provide estin	mated energy saved fo	or each energy type	e, as applicable. Tot	ficable. Total billion Btus saved	d and GHC unissions avoided	stions arounded are	d are calculated. If			(an)	(ii)	(iv)	(ak)	Estimated	Estimated	Estimated	Estimated
		inted with the measur	re enter "0". If est	'm ated savings are n	savings are unknown at this time enter "I BD"	Penter "TRD".			-		stimated Annual	Katimated		Contract of			400000	
0000 24	Extinated Annual Extinated Annual Fred Oil Saved (10°3 Gal'Yr) (10°3 CPYr)	Estimated Annual 1 LPG/Propane Saved (10^3 GalYr)	Estimated Annual Caul Saved (Short Ton/Yr)	Estin ated Annual Steam Saved (10^9 BTU/Yr)	Estimated Annual Other Saved (1019 BTUNE)	If"Other", A what is "Other"?	Estimated Annual Energy Savings (10°9 BTU/Yr)	Estimated Annual GHG Emissions Avaided	Annual F. Energy Cost Savings (\$77c) (1	Annual D Fotable Water Savings (10°3 Gal'Yr)	II.A (Non-Potable Eredwater) Savings (10°3 Gal/Yr)	Water Cost Savings S	Anrillary Cost Savings (\$771)	Annual Cost Savings (\$YYr)	Removable Electricity Output (MWh/Yr)	Renewable Electricity Conumed OMWATY) (0	Renewable Thermal Output (10°9 BTUYe)	Renewable Thermal Consumed (10°9 BTU/Yr)
0000	0000 0000	0000	0000		0.000		32276	388 849	\$42,839	0000	0.000	203	\$13,974	\$56,813	0.000	0000	0000	0.00
C3-0 00C		0000	0.000		0.080		36.529	2,710,897	\$1,479,618	3,479.000	0000	\$1,278	\$29,994	\$1,510,890	0.000	0.000	0.000	0000
200.000		0000	0.000			9.	0.989	169 052	\$8,791	0,000	0.000	03	110.63	\$17,862	0000	0.000	0.000	000
3,832,477		0000	0000	0.000	0.000		13.076	2,274.74	\$119,551	0.000	0000	00	20.	\$119,551	0000	0000	0000	000
\$200,000 0,000 0,000	0000 0000	0000	0000				3314	266.359	\$34,000	00000	0000	2 2	80	\$34,000	0000	0 000	0 203	0.000
\$164,881 103,585 0,000	0000 0	0000	0000	0.000	0.000		0.353	168 09	13,904	4,362.500	000.0	NG	03	\$3,904	0.000	0.000	0,000	0.000
8325,434 1,228.919 0.000	0000	0000	0.000	0000	0.000		4.190	715976	\$61,412	139,000,000	0000	\$0	MA	\$61,412	0000	0.000	0.000	0.000
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\$312,000 TBD 0.000	0000 0	0.000	0000	0.000	0.000		SVALUE	SVALUE	TBD	000.0	0.000	93	28	03	0000	0 000	0000	0.00
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\$154,900 0,000 0,000	0.000	0.000	0,000		0,000		0.000	0.000	8.0	1,579,000	o bob	\$2,900	2.0	\$2,900	0.000	0.000	0.000	0000
\$54,100 0,000 0,000	0000	0000	0000	0000	00000		0000	0000	20	347,000	0,000	\$700	00	2700	0000	0000	0000	0000
		0.000	0.000				0.590	101.495	\$5,000	00000	0.000	2 2	04	\$2,900	0000	0000	0000	0000
72 230		0000	0.000	0000			0.246	40.113	\$3,600	0.000	0000	03	2	\$3,600	0000	0000	0.000	9000
\$12,200 1541 0,000	0000	0.000	0000				5000	868.0	\$100	0.000	0000	60	8.0	2100	0.000	0.000	0.000	000
78.520		0000	0000				0.268	45,780	\$3,500	00000	0000	2	0.5	\$3,600	0000	0.000	0000	000
\$15,000,000 0,000 0,000	0000	00000	0,000		0.000		0.000	0000	\$1,000,000	NA	NA	MA	MA	\$1,000,000	0.000	0.000	0000	8.0
0,000		0000	0000	0000			0.000	0.000	MA	NIA	MA	NA	NIA	20	0000	0000	0000	0.000
TED 22,000,000 0.000	0000 0	206.000	0000	0000	0000		910 %	14,025,066	\$106,500	7,110,000	0000	\$5,000	03	\$811,500	0.990	0000	0000	0.000
TED 11,000,000 0,000	0000 0	0000	0000	0000	0000		37.532	6,413,372	\$403.250	0.000	0.000	03	03	\$403,250	0000	0000	0000	0000
TRU TRU TRU	00000 0	0000	0000	9000	0.000		WALTE	WALUE	TRU	TRE	0000	TRE	250	20	0000	0.000	0.000	0.000
\$20,000 ff2,820 0.000	00000 0	0000	0.000	0000	0.000		0.621	106 124	\$12,610	0.000	0000	94	0.5	\$12,610	0.000	0,000	0.000	0000
0 101460 0.000	0000 0	0.000	0.000	0.000	0.000	26	0.346	59.155	15,030	0.000	0.000	23	0.5	\$5,080	0.800	0.000	0.000	0000
\$1,000,000 ± 1,000,000 ± 50,000	0 0000	20 000	9000	9000	0,000		14.912	1,385 929	\$100,000	1,006 006	0.000	1330	98	\$200012	0,000	0.000	0000	0.000
0000 0000000 0000000	000.000') 0	0000	0.000	0000	0.000		4.440	637.592	\$100,000	1,000.000	0.000	8730	63	\$100,350	0000	0000	0.000	0.000
000.000 000.000,1 000,000,12	0000 0	20000	900 0	11 000	0.000		14.912	1,385,929	\$100,000	1,000 000	0.000	\$750	88	\$100,750	0000	0.000	0.000	0000
\$1,246,000 2,603 077 0,000	00000 0	0000	0,000	0.000	0.003	e de la constante de la consta	8.882	1,517,682	106,282	NUA	IWA	MA	08	106,282	0.000	0.000	0.000	0.000
\$269,016 169,007 0,000	00000	0000	0000	0000	0,000		1450	98 537	\$6,370.	7,482,500	0000	NIA	8.0	\$6,370	0.00	0.000	0000	0000
\$2,500,000 0.000 0.000	0000 0	0000	0000	0000	0.000		0.000	0000	0\$	NA	AUL	MA	03	08	52,560,000	0000	NIA	NA
90000 0000 00000\$	0000 0000	0000	0.000	0.000	0,000	:05	0000	0.000	0.5	N/A	WA	MA	03	03	1,051,200	1,051 200	MA	MA

		Sustainability Metrics II - Renewables	Metrics II - Renew	walnies							Control of the Contro	The state of the s	Contradictor.			Notes
(dw)	(be)	(10)	(se)	(96)	(ns)	(av)	(am)	(ax)	(ny)	(20)	(ba)	(44)	(be)	(h-d)	(he)	000
For measures the	renewable energy	est find to a renewah is associated with th	For meanives that witch from a food find to a romovable nurse, provide softmated mongy output that will replaced current food find by snengy type, as removable energy suspect is anknown at this time enter "TBD" are now able energy suspect is anknown at this time enter "TBD".	Deximated margy out	put that will replaced	reurent fassi fuel by energy type, as applicable. If no sunknown at this time enter "TBD".	y energy type, as te enter "TBD".	applicable. If no	Estimated Annual	Powmen	Parameters for site to L. Change: 3	Lampiant	Nac	White Mr.		review large
Estimated Annual E Electricity Saved (MWh/vr)	Estimated Annual Fuel Oil Saved (10*3 Gal/Yr)	Extinated Annual Natural Gas Saved (10°3 CFXr)	Estimated Annual LPG/Propane Saved (10°3 Gal/Yr)	Estimated Annual Coal Saved (Short Ton/Yr)	Estimated Annual Steam Saved (10*9 BTU/Yr)	Estimated Annual Other Saved (10°9 BTU/Yr)	If"Other", whatis "Other"?	Estinated Annual GHG Emissions Avoided (MtCO ₂ e/Yr)	(SVr) from switching to a renewable energy source	Simple Int Payback (Years)	Internal Rate of Return	Net Present Value	Savings to Investment	Estin ated Annual Social Cost of Carbon Savings (S)	Sie Printity	Additional Information
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0000	0000	0.000	0.000	0000	0.000	0.000		0000		*	1156	\$390,236	220	\$15,322	Complete	\$15,322 Complete Construction Complete
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000 0	00000	0.000	0.000	00000	000.0	000 0		0000		4	彩	(\$2346)	180	\$32,478	w	DR. Metenng Plan developed - No funding identified. Will include in ESPC if project fluiding is not available.
0.000	000'0	0000	0.000	0000	000'0	000'0		0000	ļ.	9	ANDM	(\$194,783)	0,28	52,109	1	Bore holes failed to gossitively identify leaks. Further investigation as necessary to prayonal the leaks as identified by the Leak Study for retain.
52.560	0.000	0.000	0000	0000	0,000	000.0		30,644		#DIV/IO!	MANA	ANDMT (\$2,000,000)	0.00	\$656		Jönntlind Opportunty - Project Work Stope has been developed and infrastructure sopport work may begin if finding is made available.
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re	tion Estimated Service Life	36 6	25.0	30.0	25.0	25.0	25.0	25.0	25.0
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nt (%) of	obligated pplicable r neasures of yet rational)								
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		Line Item	ddD	Unknown	Unknown	Unismown	ESPC	UESC	URSC
Is this effort'	measure beyond typical naintenance and improvement to meet a goal?	Tes.	2	1	14	24			
			3	3.		24			
		Yes	386	28	Yer	140	3md Yer	Falls (Tes	370
	If yes to H o provide F Proper:		TRD	CF9-606	Varions	Various	DAL DATES.	RE Idahol	
Does the	measure rentribute to HPSB requirement	No.	Yer	Yes	Yes	Yes	Yer	Yes	Yes
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			Covered	Covered N	Covered h	Covered by	Covered N	Covered N	Covered h
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	feature(s) Location Sip Code)								83415 (3)
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	r Descriptia	Commercial		can and Heat	ent System -	ei		v and Water	Idaho Falts Facilities UESC Project - Proposal Development
	o(t) Name o	- notrementon -	Renzing	subuted Sp	te Managem	THE DATE.	and RWMC	opert Energy	oject - Propo
	ian Massur	nerstor Set B	wer Lagoon	oler with D	Liquid Was	Water Mete.	#4 DITEC	es UESC Pr	tes UESC Pr
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	ion Measure Type	ed Process	wer Conserv	uprovement.	Wer Conterv	tering System		thing, and	
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easure		EL ST	3.8	Ü	C	Ü	100	BE	84
Hasthism	heen inclus official DOI requests? provid Project/Me	No	No	No	No	No			
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	Site # Site								DIL.
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						Sus	Sustainability Metrics I. Energy and Water	cs I Energ	y and Water											
(a)	(v)	(w)	(x)	(8)	(3)	(88)	(ab)	(ac)	(ad)	(ae)	(a)	(22)	(ab)	(a)	(aj)	(ak)	(a)	(em)	(an)	(68)
Section 2	For measures tha	of improve energy t	For measures that improve exergy efficiency, provide estimated energy saved for each measy type, as the each measy type, as	in ated energy saved i	for each energy type treenter "0". If esti		applicable. For a hillion Bras savel and OMG enrissions avorded are calculated. If eavings are unknown at this time water "TBD".	and GHG em	issions avoided ar	e calculated. If	Ectimated	-	Estimated Annual Estimated	Estimated	F stim ared	Ectimated	Estimated	Estimated Annual	Estimated Annual	Estimated
Estinated Implementation Cost (S)	Estimated Annual Electricity Saved (MWWVY)	Estimated Annual Fuel Oil Sayed (10°3 Gal'Yr)	Estimated Annual Estimated Other Served (10°3 GalXy) (10°3 GalXy) (10°3 ESU/Xy) (10°9 ESU/Xy) (10°9 ESU/Xy)	Estimated Annual LPG/Propane Saved (10°3 GalYr)	Estim sted Amusd T Coal Sured (Short Tun(Yr)	Estimated Around E Steam Saved (10°9 BTU/Yr)		wharis "Other"?	Estimated Annual Energy Savings (10°9 BTU/Yr)	Estimated Annual GHG Emissions Avaided	#3	Annual Petable Water Savings (10°3 Gal/Yr)	II.A (Nins-Potable Freelowater) Savings (10~3 Gal'Yr)	Annual Warm Cost Savings Savings S(XY)	4.0	-	Renewable Electricity Output (MWh/Yr)	Renewable Electricity Consumed (MWh/Yr)	Renewable Thermal Output (10°-9 BTU/Yr)	Renevable Thermal Consumed (10°9 BTUY:
\$60,000,00000	0.000	300 000	0000	0.000	0000	0.000	0.900		41,400	3,072.253	000'0065	.0,000	0000	10	08	\$300,000	0.000	0900	0000	9.04
81,109,000	0000	0,000	00000	0000	0.000	0.000	0.000		00000	00000	10.	38,009,000	0.000	\$26,000	03	\$26,000	00000	0000	0000	0.0
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\$15,000,000	0.000	0000	00000	0000	0000	0.000	0.000		0.000	00000	\$500,000	MA	MA	MA	IUA	\$500,000	0.000		0000	0.0
\$2,100,000	7,318,783	0.000	9,446.704	0:000	0000	0000	0000		34.683	4,782.491	\$475,581	5,259.000	0000	\$4,733	MA	\$480,314	0.000	0000	0000	0.0
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RU, PV 2012 CEDR 127-11 J In. 3.5 Organization & RE Ministers URAND 211-12 PM.

		Sustainability	Sustainability Metrics II - Renewables	wables							Reti	Return on Investment	stment			Notes
(ap)	(30)	(ar)	(as)	(40)	(an)	(av)	(aw)	(xx)	(as).	(22)	(ba)	(Pp)	φe	(Pq)	(00)	UW)
For measures	that switch from a for renewable energy	essilfuel to a renewa	For measures that switch from a fosal foot to a ranceable source, provide estin and morge output that will replaced current fosalf foot by morgy type, as applicable. If no renewable energy is associated with the measure enter "O". If estin and reme able morgy output is unknown at this time enter "TBD".	timated energy out	out that will replaced	current fossil fuel b sunknown at this ti	y energy type, as ne enter "TBD"	applicable. If no	Estimated Annual Cost Savings	Paramo	Parameters for site to Discount change: Rass	Distroads	3	Was No		
Estim ated Annual Electricity Saved (MWh/Yr)	Estinated Annual Estimated Annual Electricity Saved Fuel Oil Saved (MONLY v) (10°3 Gall'y)	Estimated Annual Natural Gas Saved (10°3 Cf/Yr)	Ectin ated Annual LPG/Propane Saved (10^3 Gal/Yr)	Estimated Annual Coal Saved (Short Ton/Yr)	Ketina sted Annual Ertimated Annual Ertimated Annual Ertimated Annual Perpagana Saved Coal Saved Sream Saved Other Saved (10°3 Cal'Xy) (10°9 BTU/Xy) (10°9 BTU/Xy)	Extinated Annual Other Saved (10°9 BTU/Yr)	If "Other", what is "Other"?	Estimated Annual GHG Emissions Avoided (MtCO ₂ e/Yr)	(SVr) from switching to a renewable energy source	Simple In Payback (Years)	Internal Rate of Net Present Return Value		Savings to E Investment Ratio C.	stimated Annual Social Cost of arbon Savings (S)	Site Priority	Additional Information
000 0	000 0	0000	0000	000 0	0.000	0000		0000		Eg.	WOLVIOL BERESESSES	**********	0.17	\$65,746	s o	Line Item project to eliminate the need to run itingenerators whenever the Reactor is operating. Final solution to significant operational issue.
0000	000 0 0	0000	0.000	0000	0 000 0	0000		0.000		45	WINTING	(700,1978)	0.28	0\$	0 8	Current sewage lagon is against antly oversized, project to evaluate, design, and construct a resizing other in lagoon.
0.00	0,000	0.000	0000	000 0	0000 0	0.000		0000		Missing	WAALUE	*VALUE!	#VALUE!	\$65,746	đ	Project Concept Identified, Funding Source Mot Determined.
0000	00000 0000	00000	0000	00000	0000	0000		0000		Missing	SVALUE	#VALUE!	#VALUE!	#VALUE!	4	Project Concept Identified, Funding Source Not Determined
0.000	0.000	0,000	0000	0000	0000	00000		0000		19	WDIW(0)	(\$1,652,315)	0.17	698'63	E.	Project Concept Identified, Funding Source Not Determined
0.000	0000 0	00000	0000	000 0	0000	00000	l H	0000		30	WINN	(\$9,173,208)	0.39	03	114	ESPC Project Development on hold EM Program
0000	0000 0 0000	0000	0000	0000	00000	00000		0000		41	9651	\$3,497,379	267	\$102,345	14.	Final project still being developed/refined
00000	0.000	0,000	0000	000 0	0.000	00000		0000		#DIV/01	#NUM!	#NUM! (\$250,000)	000	0\$	S	Survey Only - No Project

2012 CEDR 12-7-11 zim. 3-3 Conservation & P.E. Measures 1217 12 PM

Source Energy Savings Credit

Requirement(s): E.O. 13123

Instructions: Optional, complete the tables below for projects that increase site energy use but save source energy. For additional guidance see: http://www.eere.energy.gov/femp/pdfs/sec502e_6/20guidance.pdf. Edited and new data cells should be highlighted in light blue.

Source Site Lab

EPACT Goal Subject Buildings

Name of Project Saving Source Energy in FY 2011 (insert additional rows as	Annual Site Energy Increase with the Project	Annual Source Energy Saved with the Project	Adjustment to Annual Site Energy
necessary)	(10^6 BTU/Yr)	(10^6 BTU/Yr)	(10^6 BTU/Yr)
Project No. 1	0.0	0.0	0.0
Project No. 2	:0.0	0.0	0.0
Project No 3	0.0	0.0	0.0
Totals	0,0	0.0	0.0

EPACT Excluded Buildings

Name of Project Saving Source Energy in FY 2011 (Insert additional rows as	Annual Site Energy Increase with the Project	Annual Source Energy Saved with the Project	Adjustment to Annual Site Energy
necessary)	(10°6 BTU/Yr)	(10°6 BTU/Yr)	(10~6 BTU/Yr)
Project No. 1	0.0	0.0	0.0
Project No. 2	0.0	0.0	0.1
Project No. 3	0.0	0.0	0.0
Totale	0.0	0.0	0.0

INL FY 2012 CEDR 12-7-11 sisx: 4.1 Source language 1/18/20128/49 AM

Page | of |

List of New Federal Building Construction and Major Renovation, HPSB Compliance and Projected Utilities Consumption

Remittenening UP Act 2003, USA 2007, DOE O 436.1 Linearizate Update Die 3 e oftwer hyddenig condemities et Ausze after et 2011, Chill e und 330

L																					The state of the s
							Basic In	Basic Information								Par com Sec 43	plimee with 8 of EESA w	or compliance with For compliance Sec 438 of EESA with DOF O 436.1	Complete thin s was CD	Für compliance with For compliance Complete this section if new building project. Complete this vertinal Sec 138 at 133A with DOI FO 348. When the section is a construction has been completed.	Complete this section if construction has been completed
å	and and	ProjectID Building/Project Name (Zip Cele) (MARDDAY)	Location (Zip Cede)	Planted or Actual CD-2 Date (MMADD/VV)	Current CD T	Tani Project Cost (B.M.)	Number Type of Feelikes	Padity Charge Bree	Anticipated Electricity Usage (RWLV1)	Cake Pentity (1913)	Cetimand Annual CBG Ladintees Availed (MCCO,eTc)	Antitipand Pendils Antitipand II.A Water Unige (1013 Water Unige (1013 GalVy)	Amelyand ILA Water Usage (10°3 Gal/Ye)	Exchaled from Energy O	Expected Age Heliking S Occupanty Fr	Spare medicing	W-Sied of fivillia	Square malnining restore pre-schee (AEEE) best Festige development by tellight at CP3		Estimated (from at heart300% to har ASHRAL SH 2011, will design achieve SHLAK SH 2011 to maximum keys learnery officiary terms of reasy; use that lettle sees of the first policies?	In terms of energy use, porcentage before ANSIASHRAEAR SINA Standard 90.1 achieved
1-1M	- 11	Energy Sements	13413	WA	Complete	122			unt.	THE	COLU.	OULL		2100		91,000 Yes	87	AREDO GAR	Physical Control	Yes	
NA.4 Le	Lease	Research and Education Furant	83415	WA	Complete	665		H	180	180	TBD	TBD		5105	•	148,000 7 119	31	REED COM	Physical gree 30th	Ver	0.78
nn.s		MFC Dold Room Replement	SIME	NA.	Complete	43			2180	9	TED	Tub		2012	-	+,186471+	Na	Not Applicable	Not Applicable	V ter	
871		Emission Materials Carcertages Lab	2415	HIA	Umplate	pri			THD	0	TBD	TBD		2000		12,000 V cc	37	EED@ C+M	Parameter 1986	¥.ee	
MLS.		MFC Tedancid Support Fraishog	2415	MA	Complete	COT .		E.	TED	n	11817	THO		THE STATE OF		17,000 V rs.	27	TERRIBORIA	Planning for 20%	Vec	
278		ATRUGIngler List Room (2041)	63453	316.	- complete	015			GH1.	20	GB1	TBD		2015		1,890 Year	Ne	Net Applicable	Not Applicable	Yes	

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Internation Plans the first of the definition of the section o

applicable and available

			Dog Comment						- dimension		THE PARTY OF THE P								İ		
0Sd	Site #	Sine	Building Name	FIMS Praperty Sequence #	Square Fortage	Compliance Path	Assessment Date (Planned or Actual) (MM/DD/VV)	Currently nases Integrated Design GP7	Currendy moest Energy Performance GP?	Currendy nwets Water GP?	Currently meets Indoor Environmental Quality GP?	Currendy mests Materials GP?	Planned or actual compliance PV for all 5 Cualing Principles (VVVV)	CD Level on 107.08 P	CD Level USCRC on 107.08 Project Title R	Planned or Thanned or Actual Actual Actual Date Date Date MM/DD/VY)		Planned or Actual LEEDS EBOM Certification	LEED EBOM A	Planned or Actual LEED N	Planned or Actual LEED NC Certification Day OMN/DD/YY)
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2	602 13	1877 1878	(TSTH) 618-31	015-607	13,583	(60331	N/A	1											0	Total Pendang	TED
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ių.	E02 D			96658	46,494	Graining Principles	3013 B	dat Yes Mes	Not Yes Me.	Not Yes Mes	la Ye Me	Not Yes Met	2014					- COP			
育	607 194	11TH IL-616		96834	272,309	Gesting Principles	3013 B	Not Yet Met	Mot Yes Me	Not Yet Met	Not Yet Me	NotYetMet	2014								
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iệi lệi	602 DV	D.T. IF-663			21,716	Outding Principles	2012	Met	Not Ve Met	Nes 1	Not Yet Me	19pc	2012					2			
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9	501.4	DE-42 CF-621		85118	11,787	Geating Principles	2014	Not Yet Mer	Not Yet Me. 1	Not Yet Mer. 1	Not Yet Mer.	Nor Verlifer	2002	. 11							
明	500 E D5	D.C. CF-623			12,615	Guating Principles	3014 P	Not Yet Met	Na Yeme	Not Yet Met. 1	May Ma	Not Yes Mes	2015				100				
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Data Centers

Requirementics EINA 1907, DOE O-150.1
Institution. Update the list of data centers and address all cells inglighted in orange. For additional gridance see comments in row 9 of each column and Appendix C of the Site Sustainability Han Curdance. Source Site Lab 1009 Data Center Survey and PV 2011 CEDR (formerly known as the PV 2010 CEDR).

									Basic	Basic Information	66									The state of the s		
084	Site #	Site	GOCO	GOCO : Data Center Name Puna Center FED. Data Center Name Punction	Data Center Function	Assigned DCEP POC	Assigned Data Conter POC DCRP POC	Turget Dute for Closure (CV) Phase of Closure (If Scheduled)	Phase of Gosure	Street Address	Street Address 2.	ě	State	State Code	Country	Gross Floor Area (Sq.Ft.)	Facility Cost D \$584.Ft. C	Hechicity Inchided in Coat7 (V/N)	Electricity Included in Ownership Type Sout (V.N)	Data Center Tier Type	Electricity Metered (X/N)	Netricity Total Data Center Metered (Facility) Power (X/N) Capacity (kW)
	602 IN	INE1	0000	F-608 - Butinece Systems Data Center	General		Tura Chapman			1155 Foote Drive		Idaho Falls	а	SB412 USA	15.A	1,800		Yes	Yes II. Agency Owned	7: Unknown	Yes	1,500,000
	Z09	INLI	0000	IF-608 - External Hosted Apps Data General Center	Géneral		Tina Clapman			1155 Foole Drive		Maho Falls ID 83415 USA	a a	83415T	BA.	1284		Yest	Yes It Agency Owned 7: Unknown	7: Unknown	Yes	Unkniesin
	602 ID	INI.1	GOCO IF-654		General		Jeff Stuffor		- II	2525 Fremont Avenue		Idaho Falls	В	83415 USA	SA	3,700	THE	Yes	Yes S. Lesse and retroffit 3: The III	3: Tier III	Yes	1,500,006

Big. PV 2013 CED R.12 27.11 Steps 1 Data General 111 Strates of AM

Notes	Additional Information	INI.'s IF-608 Data Center was built in the 1950's	DAL's IF-608 Data Center was built in the 1950's	Tier 3 facility as defined in 38% DOE Computing Ecosystem: 0.025 - 0.1 petal/lops
2	Percent	SG9 _b Dadit	JNI 5688	384 DOE
Network Storage	SANWAS DAS Dead (TB)	9.	2	140
Netwo	UNINAS SA DAS Hell (TB) Us	100	25	370
100	Verage CPU SA Utilization of All Physical To Servers	Mar.	896	20 - 98%
ization	Total A Operating U Systems A Count (#)	198	152	29
Virtualization	Total O	190	22	0
		11	*	0
Î	Total Total Physical Physical Server Host Count (#)	325	131	29
	Other	-	a	-
	Chinas	68	9	30
, in	Unis	36	15	
s de	Windows Unix Linux Servers Servers	192	ę	e
Physical Servers	(Other)	•	0	0
E	Mainframes (IBM or compatible)		0	0
	Sq. Ft. per Computers Rack or HPC Systems	5	0	×
	Sq. Ft. per Rack	35	41.	8
	Current Rack Count (#)	- 51	33	-11
	Has A DC Fro Assessment been Conducted?	No.	No	N.
	Silmated Power Usage Effectiveness (PUE)	0.87	0.73	Incomplete
	Watts per Sq.ft.	319,44	116.82	TDD Incomplete
	Cost Per kWh (if known)	\$0.05	\$0.05	ant
IT Eschilles, Energy	Werage II Electricity sage (kWh)	575,010	150,000	TBD
III Fac	Total Data Center II Power Capacity (RW)	300,000	70,000	1,000.000
	Average Data Center Electricity P	503,000	110,000	TRD

Page 1 of 2

Fugitive Emissions: Refrigerants and Fluorinated Gases, Mixed Refrigerants Calculator

s applicable. Requirements): DOE O 4363, E.O. 13314 Instructions. Complete data fields highlighted in Source: StreLab

Duta Type Entered	Fixed Year	2011 Fiscal Vear	-														
Refrigeran(T Composition ype:	- 2	Enit of Returned to Measure Sonoly	ty Unit of	Emitted Refrigerant Ouantity	Unit of 1	10,623 н	HICS HE	HECAL HECAS	BPC-33 BPC-32 BPC-40 BPC-138 BPC-1349	a HFC.143a	HFC-152a	HFC-227ea	HFC 236 IA	HTC 245fa	PPC-14 P	PFC-116 PFC	PUCZIN PFC.(e)31N
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R-32	15,6 lbs		0.0 lbs	15.6 lbs			13.6	9	17 17								18 80
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R-135	15.6 lbs		0,0 fbs	15.6 lbs			58		13.6	-	100		3.1				
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R.143a R-I.Ga	0.0 lbs		0.0 lbs	0.0 lbs						0	0.0						
R-152a R-152a	sq1 0'0		e.0 lbs	sql 0'0 lbs			100		100		0.0						33
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R-14	0.0 (lbs		0,0 15s	sdl 0.0	3										0.0		
R-116	0.0 lbs		0,0 lbs	40 0.0 lb4												0.0	
R-218	9.0 lbs		0.0 lbs	0.0 lbs													0.0
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7.2 Mixed Refrigerants

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Total F. Gas Emitted by Type	1	Z'912 TY	0.0	75.7	108.9	80	583	979	0.0	0.0	0.0	174	0.1	n.
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7.2 Mixed Refrigerants

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Montey, Darlin 1921 Decapita																					112	Total Cale	guk).	9.4	NCT.
Minister Darme 202 Deception														Area 2											
	Dest Clark	ACSTOR.	E OWNERSON	Told Population	Monthlyne	Distance DED	Perspita	The Party	other of BHE . Mr.	Manner Clk	000	Cit, Carmine	Dogwood	Died	Day	SCHOOL S	Degret 1	and Change	SHOP LATTER		Cold Questing	and care	- 100.0	Design	Dane.

The second second	-	25 55	100		100	200	200	100	700	- Strait				The second secon	1		- A	10.00
Trees 7794 GRC	Gall. Dyge. Comparison Served by the Served by the Served by the	Tetafogulain Seretly its Squedyna	Wanter ye Yes	fraction 1610 Absorbable Todae	No cycle Mil. prekased it greate	Tale Steree	Medicanis CR. Traduction Cognition	Dark Linear	CR. Carrellen. Cetter for Sapilia Systems	ı ji	Part of the last	Das Orberten Obs	The Date of	Dre Dated Renorm	Total Quantity Parents	11	Nather Ganter	100
Continuing Systems	, (C14)	9	***	1	24-01	mund/xgs(2	7	TOBOTA		- AN	- BELL	CHILDRE De		2000	- An	MECH	attense	A CHITTELLS

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4792	JOSEPH COM
Cat Assessed	1974/14/20

Page 1 of 1

Fugitive Emissions: On-site Landfills and Municipal Solid Waste Facilities (Domestic Only)

<u>Annanominal DOS 0-460, 1, 20, 19314</u>
Immericana, Omepiese dan bista, hydrighted in , or spitualio
Source, Stellado

Princess Type	GHG Type	Composition	Total Quantity Unit of Measure
andfill Gar Production	Many of Solid Watte Disposed Create		709.0 Short Tons
	Landill Cych Date		1964 Yes
	Landfill Gove Date		3025 New

	THE PROPERTY OF SECURITY		22 CONF	222																
Process Usps	GHG Type	Composition	Total Quantity Emitted by Type	Unit of Messura	Percentage Uncentralied Release	Landfül Gas- Collection System Efficiency	Verting Lone 9	Total U Quantity M	Unit of B Measure On	Methotropic Barterin Oxidition Factor	HHV Unit of Messare	Energy Content of Mediano Combused	Unit of Ch.	Combostion Emission Factor	Combosine Unit of Measure Oxidation Tactor	Combustion Country Cou	by Measure	GWP lo Type	Unit of Que Measure Engl	Total Quantity Lint of Engited by Measure Type
Landfill Gas Production	Carbon tronde (hopenic)	2002	807.08	82739 MT (Megagnam)	Section .			TAL 6728		F				-			TM 6.528			827.9 Mil CUE
	7	CHA	301.7	301.7MT Otherward	1,001			3017 MT		The same						2	2715 MT	2000	-00c	5,702.1 MET C
Methetropic Oxidation	Carbon drom de (teograne)	200								1009							33 t) JUL			BRO MTCCE
Landfil Gas Collection Luss Methane	Methane	CILA				960		TM O'O	H	100	I I	1			1		noper	#500A1#	5	CONT. COS
Mediatropie Oxidation	Cart-on down de (brogenic)	200								1884							оруш			0.0 MT CC2 Division
	Carbins di sander (Nomenae)	CXXD								H	43.53.01.05bu.0.017.0354	20 02	0 MD4Z8m	massero Merces	CCZZZZZZZZ	870	a a Mer			0.0 MTCCE
Landlill Gas Plaring	Methan Paress oxide	024 N20				100	0.00	CONT		49	43.8 DOMENDATORA 43.8 DOMENDATORA	M00 000 000	00 NO Chin	0.000003 hrr chahaam 0.000001 hrr recondition	MT CEANDIBIN		0.00ATT	31000	න්න	0.0 MT CCO.
Landfill Gas Flare Venting Methans	Ш	(334						0.000									noper.	31(0)	3	OTATION

5,202 L MT CO2s	910.9 MT CO2
J COZe	d CO2 (biogenie)

monthal Jandill Albu protocology Source 2: ILS BPA Trainings Transfer Libraries Control of Training

7.5 Fugitive Landfill

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encase Confee An Take in the Line in	memory of treit of which is not 1998 if
SERVICES Complete date for the language date in the experience	The country of the co
	Complete And Balta Linds Line and Complete And Complete And Application
100 mm m m m m m m m m m m m m m m m m m	Staff at

Protect Type	GRETSPF	Compatition	Taral Quantity Enginetry Type	Entated Tend O Country Entanday	Quantity Engined Unit of the Type (the Measure Englishment)	Committy England by Type	Dai of Measure GWP by Type	Dab of Measure	Total County Dated Tree Tree Tree Tree	Entrary Const.	Palari	Saljer Dad Constity Entranty	Total Operation of Dates for The	Sundy Enited by Type (30s) (neckel-type) Terre Sobrest	list of Measure
Adam Aril Production	Philippe code	CEN	0.0	000	CO kee	0.000	-	30,000	63 pa CCCA	0.0	UNISH COS	ge.	929	9(0)8	90 PG (XS)
Alembasan Production	Curon dones	500	000	10.0	0.0 Bar	2000		203	0.00 x 0.00	_	000ATC000	90	0.0	200	1,000
Aleminen Fraderian Aleminen Fraderian	1907.116	Che (Chich)	00	000	0.000	0000	+	6.300 CO.S.	00 to 003	1	UNIATIONAL CONTRACTOR	0.00	000	000	OUDME OCCU-
Antonomia Pred we then	Cabon dough	500	0.0	300	- AU00	0.000	H	1000	-000 mgra		- 4000 JANGOO	200	0.0	SUPPLICES.	1000
Ceneral Production	Ochon derriès	222	000	603	COBS	2000		1639	0.0 pg CCC8	0.0	UNINT CODE	0.0	000	0.00	1000
HCPC-22 Preduction	MCA	CHE	203	300	Q0 Bry	2400	40000000	400	-2002 Edge	00	0.0 Per 0.00s	00	00	500	0.0 p.m. CCD-
fron and Seed Production	National distrates	000	000	100	100 34	0.000		1009	0306-0336	0.0	обрасов	100	0.0	Mora.	DOME COS.
Lane Pred witen	Carboti dentice	555	000	100	0.00	2000	H	1000	4000 Mind	0.0	BOOKT COS	000	.00	2000	SCHARGOS.
Sinte Aut Protuction	Physica axel:	BIO	200	200	5.00%	0.000	L	Tiologe	0.002,000	0.0	BUNKT OCO	90	0.0	Man	SCHOOL CODE
Particle Arrelessions	Saffer bendlamete	580	Dit I	0.0	(11)	300	5000000	SOLVE T	BILLIA-CXIA	0.0	no particione	0.00	U.S.	TOPAL CO.	1000
Paly and Paper Production	Outron decrets	200	0.0	100	500	200	-	TIONE I	UNSECOND-		angerressa-	- and	OD)	Wign.	un har one-
freezoten and Air Contition Europeant Manufacturing	1000	200	100	000	0.000	0000	102/11	*02	00000000	0.0	0000000	00	000	0000	MIT COLDS
Degration and Agricum Companies Manufacturing	MAC SA	DATE:	Die Control	000	0.000	0000	0.00	200	OUR CALLS	I	ACCOUNT OF	000	COLD	0.00	ALL COMP.
Direction and Air Condition Ecohomete Manufacturine	MC-125	CHRISTIN	100	- CD	0.00	Tiller	2.800	2000	U D Day CY Che	0.0	ALC: O	UG	00	0.00	fr CS.Da
frigeration and Air Candidon Equipment Manufacturing	150.134	CHORDES	000	gro	CO (10)	0.000	1,200	703	0.000000	0.0	MTCCO	00	00	A SU	AT COOL
freezation and All Candition Engineers Manufacturing	HC.(4)s	CENTRS	D. D. D.	00	0.0 Em	200	3,800	COS	0.0 kg CCD-	0.0	MTCC9=	- 00	00	NUU	MT DOD.
Prigeration and Air Condition Equipment Manufacturing	MCCON	CHOCAGA	000	0.0	0.0 84	0.000	140	900	0.0 M COS	0.0	MICCOL	00	0.0	000	1000
freernish and Air Condition Equipment Manufacturing	10°C.227a	TECOPORT .	000	00	CLD No.	0.0	2,900	200	0007000	0.0	0.0000000000000000000000000000000000000	90	00	200	MT COD-
Description and All Condition Fundament Manufacturing	THE TALK	CHANCE		000	- Child	THE PERSON NAMED IN	1,020	THE PARTY OF THE P	Different Comment		NTOTAL	100	Did	MODE	MITTER.
Othersten and the Condition Engineers Manufacturing	29C-14	CPA	90	00	2033	0.000	0.30	400	Utilize CALIZE	0.0	MICOOM	0.0	0.0	W 20	MI CCD.
Prigorando and All Candings Lyspanied Manufacturing	1972,116	(21K((01/43))	20	do.	ab be:	2000	0.20		400 to 80	0.0	MECOGN	00	0.0	M GD:	ALC:UP
Refrigeration and Air Candidon Equipment Manufacturing Refrigeration and Air Candidon Equipment Manufacturing	PC.318 PPC.318 or PPC.<313	COR (CROSSE)	000	00	0.03m	2400	7,000	800	400 adan	00	MOOR	90	070	7600 7600	MIT COOP
	2000	200	100	0.00	-	100	Oliv At		0.000		100000000000000000000000000000000000000	200		2000	1
Statement or the Manufacturing	THE THE	CHOIC	Did.	00	- PE 0.0	0.00	059	1	200 PB00	0.0	MTCOOL	00	0.0	MODE	MEGG
makemble me Manufacturing	PRC 14	CE4.	00	90.	0.0	D.O. D.O.	9 9	4000059	0.00 e COSe	0.0	no Mrccos	00	Ord.	0.00	MF CCOs
series and we have districted as	PKC-DA	(198(0933)	90	00	9000	200	8,300	200	0.0 hr CO36		ALCOD#	00	00	100	1000
State of the Manufacturing	DOP THE DOCUMENT	CARSO CENTRALES	000	000	00000	20000	2,000	20000000	20000000	1	OCCUPATIONS OF	00	000	A COLD	ST COLD
Proposal or her Manufacturing	Galifer benediganche	4	0.0	0.0	110 km	100 00	23,000	ADC.	BILLS CLIA		UU MATTER Que	00	UB	MUL	ME OCCI-
	Faire (NO Taxana)	The state of the s	and the same	nu u	- Min	T. Company	CL	No.	THE COLUMN	1	Arrivor.	D.O.	MIL	Nava.	ATT COLUMN
mer Province Numer	Trust GHG Dane		100	900	-190	0.000	Esec ONT	400	0.0000000000000000000000000000000000000		UD NET COSA	0.0	0.00	MUU	Mr.COD.
		-							The state of the s						

Federal Employee Business Air Travel Requirement(s): DOE O 436.1, E.O. 13514

Instructions: Complete data fields highlighted in orange, as applicable.

Source: Site/Lab

fault Methodology										
			Step	1				Step 2		
Process Type	Flight Distance Type	Fuel Type	GHG Target Subject Mileage Air Travel by Segment Type	Unit of Measure	Emission Factor CO2	Unit of Measure	Emission Factor CH4	Unit of Measure	Emission Factor N2O	Unit of Measure
	Short Haul	Jet Fuel	3,066,129.0	Passenger miles	0.277	kg CO2/Passe	0.000010	kg CH4/Pas	0.000000	kg N2O/Passenger Mi
F	Medium Haul	JetFuel	5,244,640.0	Passenger miles	0.229	kg CO2/Passe	0.000010	kg CH4/Pas	0.000009	kg N2O/Passenger Mi
Aur busmess travel	Long Haul	Jet Fuel	21,963,466.0	Passenger miles	0.185	kg CO2/Passe	0.000010	kg CH4/Pas	60000000	kg N2O/Passenger Mi
	Unknown	Jet Fuel	0.0	Passenger miles	0,271	kg CO2/Passe	0.000010	kg CH4/Pas	60000000	kg N2O/Passenger Mi

Advanced Methodology										
The second second second					200	Step 4		-	The second second	
Process Type	GHG Type	Composition	Annual GHG Target Subject Emissions	t Unit of Measure	Emission Factor CO2	Unit of Measure	Emission Unit of Factor Measure	Unit of Measure	Emission Factor N2O	Unit of Measure
Air Business Travel	Carbon dioxide	CO2	0'0) Ibs				100	30	
	Methane	CE4		Ibs				J		
	Nitrous oxide	NZO		1bs				1		

Source 1: U.S. DOB. Federal Brergy Management Program, See at: http://www1.eere.energy.gov/femp/docelenergyddarportfy09.xis Source 3: U.S. DOB. Federal Brergy Management Program, Section 9, Technical Sapport Document Source 3: GSA Travel MIS Tool

Page 1 of 1

8.2 Air Bus Travel

Requirement(s) DOE 0 436 1, E 0. 13514	
Instructions Complete data fields highlighted in:	as aprulicable

			-		72					7	1	100		Step 2		A	100	10 miles			The second second			
Process Lyge.	VolumInge	FuelType A	Number of Agency Burness Trips	Average Rendal Mileuge per Trip	Average	Unit of Measure	Total Milkage by Vehicle Type	Unit of Mearure	Parter Unite	f Measure 1	mission Pactor CH4	of Measure Fac	nission ctor NEO	it of Measure	Total Quantity Emitted COX	Total Quantity Emitted E	Total Passifity Initial N20	nit of Partic	CWP CW Factor Fara for CH4 for N	Unit of Unit of 200	Total Quantity Emirted (COSe)	Unit of Messure	Total Smithed COSe)	Chair of feasure
nural Buriness Travel Emissions	Passenger Car	Gasoline	07600+	Trust.			191,371.0	Alibe	0.364 ptg CO.	SOME .	SOORT KEC	SAME.	0.00003 kg N.	SO/Mile	62,379.0	5,3	5.51%		21	310 00%	8081,40	₹00 %	64.2 141	COZe
Rentals Emissions	SUV or Truck	Gasoline	00	17			00	Vile:	0.519 kg CO	Wille	3,000,055 kg C.	14/Mile	0.000047 kg N	OMfile	00	0.0	3400		22	310 CO26	00	\$C028	14 0 O	0200

Process Type.	Vehicle Type	FuelType	Vehicle Lype Agency Burness 1	Rental Mileage per Trip	Average	Unit of Measure	by Vehicle. Type	Unit of Mearure	Parter Dai	Init of Measure	Parker OH4	Unit of Measure	Emission Factor NEO	Unit of Measure	Quantity Emitted COZ	Candily Emitted CH4	Creamity Emirred N20	Unit of Pa	Factor Factor for COZ for CH4	Factor for NGO	Unit of Ou Measure En	Constity Uni Emirind Mes (COSe)	Unit of Quantity Measure Enitted (CO2e)	dity Unit of
Gmund Buriness Travel Emissions - Passenger Car-	Passenger Car	Gasoline	0'60F	1000			191,371.0[Alle	0.364 ptg CO2/Mile	32///036	0.000 GET kg CH4/MGIe	CH4/Mile	0.000031	OLD ORS 2 RECOMMILE	62,379.0	5,3	5.5		1 2	310 0026		64,190.6[kg CO	88	64.2[MT.C
Rentale Emissions	SUV or Truck	Gasoline	00	V.	1		loo	10 Miles	0.519 kg CO2/Mile	H	0.000036 kg CH4/MGle	CH4/Mile	0,000047[leg N2Offide	0.0	0.0	000		1 2	310 00%		00 % CO2	80	COMPLE
																				88	Sub-Total Rental Emissions	missions		GAZINT COZ
1000									ı				ı						ı	1				I
Name attacks					ľ							ľ	5	Step 2	-	1		-	1	l	200	200		1
Process Type	VeliceType	Vehick Type Total Minagely Vehick Type	Cotal Mileage by Vehicle Type	Average Passenger Miles per Trip	Average	Unit of Meanine	I otal Milage by Vehicle Type	Unit of Meserum	Sector Uni	of Measure	Factor 15 CR4	Unit of Measure	Enission Factor N2O	Unit of Measure	Total Quantity Emitted COR	Formal P	Tored Quantity Engined NZO	Unit of Fa	GWP GWP Factor Factor for CO2 for CF4	CWP Factor for NZO	T Unit of Qu dessure Emi	loral connidey Uni dried by Mes Type	Indiof Quantificacione Endiand	al diky Dairol al hy Messur
	Edonousy	Gasoline	0				2,107.9 Miles	धाङ	0.315]kg CO24/Ele	329/636	0.000011 kg	kg CH4/Mile	0,000015[k	0,000015 kg N2O/Mile	0.499	00	0.00		11 2	310 002		674.2 kg CO.2s	Os.	O.7 MET.C
	Compact	Gasoline					43,406.7 Miles	file	D287 kg CO2/Mile	D2/Mile	0.000011 kg CH4/Mile	CH4/Mile	0.000015	OCOOOLS leg N2O Male	12,457.7	0.5	0.73		1 2	310 0026		12,669.1 kg CO2e	36	12.7 IAT CO2e
	Midsize	Gasoline		Ì			236,740,8 Miles	(iles	D314 hg CO20Aile)20Aile	0.000011 kg	kg CH4/Mile	0,000015/k	0.000015 kg N2O/Mue.	74,336.6	2.5	3.61		1 21			75,489.7 kg CO2e	8	75.5 MT CO24
	FullSize	Gardine				0	3044242 Miles	files	0.392 kg CO2/Mile	D2/MEDs	0.000011 kg	kg CH4/MGle	0.00001518	0.000015 kg N2O/Mile	80,134.3	2.1	3.118		7	310 00%		81,129.9 kg CO2s	8	81.1 MT CO2e
	Lucus	Gasoline					39,563.5 Miles	(ales	D.445 Jr.c CO2/MEDs	OZ/MEJo	0.000011]kg	kg CH4/Mile	0.000015	OCOCOLS RESOMBLE	17,605.8	0.4	3f90		1 2	310 002		17,798 4 kg CO2s	20	17.8 MT.C
Ground Business Travel Emissions -	MunicutWagon	Gasoline					17,657.0 Miles	(1)es	D.435 Rg CO2/MBb		0.000011 kg	kg CH4/AGlo	0,000015	0.000015 kg N2O/Mile	7,678,6	0.2	3r(€'0	10	1 2	310 00%		7,764.6 145 002	Se.	7.8 MIT CO2.
Rental Mileage by Class	Smalsuv	Gasoline			í	9	119,588.9 Miles	files	D.442 kg CO2/Mile	22AAGLe	0.000015 kg	kg CH4 Mille	0.000016	0.000016 kg N2O/Mile	52,858.3	1.8	1.9 1/2		1 2	310 0026		33,477.5 kg CO2s	8	SS S MIT COZe
	MedmmSUV	Gasoline					65,367.B Miles	files	D S28 kg CO2/Milk	CAMINE	0.000015 kg	S kg CH4/Mile	0.000016	O DO DO DE RESOUNTE	34,513.8	1.0	100		1 2	310 002		348522 kg CO3	8	24.9 MIT C
	Lags SUV	Gasoline					44,974.B Miles	tiles	0.557 kg C	hg CO20nille	0.000015 kg	S kg CH4/Mile	0,000016	0.000016 kg N2O/Mile	25,050,5	0.7	0.73	10	1 2	310 003		25,283.4 kg CO2e	38	25.3 MIT C
	Passenger Tan	Gasoline					2,407.0 Miles	illes	0.585 kg CO2.045	329,636	0.000015 kg CH4/Mile	CH4/Mile	0.000016	0.000016 kg N2O/Mile	1,405.2	0.0	0.0		1 2	310 0026		1,417.6 14 00036	Os	1.4 MTC
	1/2 Ton Piclup	Gasoline					0.0	O.O.Miles	D.S45 kg CO2/Mile	OZAMDe.	0.000015 kg CH4/Mile	CH4/Mile	0.000016	0.000016 kg N2O/Mile	0.0	0.0	0.0		1 2	310 003	41	0.0 kg CO24	35	O.O MIT C
	Unknown	Gasoline					5,362.5 Miles	files	0.545 kg C	COZANIA	0.000015 kg	5 kg CH4/Mile	0,00001618	0.000016 kg N2O Adde	2,917.1	0.1	0.13		1 3	310 00%		2944.8 kg CO2s	8	29 MTC

													Step 2										
Precess Type	Vesich Type Puritype Fuel Dynchased	FuelType	Total Quantity Fuel Purchased	Unit of Measure	Average	Unit of Measure	Total Mileage by Vehicle Type	Unit of Reserve	Factor Din	it of Measure	factor Unit of Mo	Enies Factor J	ion Unit of Mess	Total Onantity Emitted COS	To the second	Committy Emirhed N20	Unit of Fars	P CWP br Pactor Og for CFH	CWF Unit of Factor for NZO	Total Quantity Emitted by Type	Unit of Measure	Total Quantity Emitted by Type	Unit of Measure
	Passenger Can	Gasolme	000	rallors	W SET	Ailes / Gallox	-		8.778 kg C	OCCALION	0.00024 kg CH4/Gaz	Den OD	US4 kg N2O/Gallon	001	0.0	0.0		1 21	310 0026	0	0 kg 002s	0.015	1.00%
Candid Diemese I ravel Canasaon	SUV or Truck	Gasoline	000	Pallore	T. T.	Alles / Gallon			8.778 hg C	702/Gallon	0.00027 kg CH4/Ga	Jon 0.01	1028 Jer N2O/Gallon	00	0.0	000		1 21	310 0026	0	0 kg CO2e	0.0	T CO2e
Nemal Dreft Full Purchase	SUV or Truck	Diesel	000	rallors	100	Ailes / Gallon			10.236 kg C	702/Gallon	0.00002 kg CH4/Ga	lon 0.0	TOTAL NEO/Gallon	100	000	000		11 21	310 0026	0	0 kg CO2s	0.0	T CO2e

										100	dins	2			1						
Process Type	Vehicle I ype	Fuel	Number of Type Agmey Business Trips	Average Passonger Milesper Trie	MPC II	Unit of It	by Vehicle Measure Type	Emission Factor Unit of Mea CO2	Emission Factor CH4	on thit of Meanum	Emission Factor NGO	Total Quantity Emitted COE	Fotal Quantity Emitted CH4	Total Descriting Emitted N	Thirst Face learne for O	r Factor	CWP Uni	of Quan ure Emitte Lyg	al United	Total Total Total Total Type	Unit of Measure
0.0	Passenger Car	Gasoline	00	00			O.O.Miles	D364 kg COZAMA	0000	331 kg CH4AMbe	0.000003 kg N2O/Mile	00	000	2000		1 21	310 0026		00 kg CO2	10	MIT CO2e
Caround Dusmies Leaved Emissions	SUV or Truck	Gasoline	00	00			OD Miles	DSI9 kg CO2/Mile	00000	336 kg CH4/Mile	0.000047 kg N20/Mile	000	0'0	3000		1 21	310 00%	L	00 2003	0	MT CO2e
Charles of the Control of the Contro	SUV or Buck	Diesel	00	00			ODMINS	0.581 ltg CO2/Miles	00000	301 kg CH4/MGle	DOCOLO S Reg N2O/Mile	00	00	S(0.0		21	310 003	1	200 % DO	0.0	MIT COZe

Advanced Methodology												5005								
Process Type	Vehicle Type	Total Type Reinbursel Milesp	Total Reinbursed Milesp	Average Passenger Miles per Trip	Average MPG N	Unit of beaute	rd Milesge Us y Vehicle Ma	ited Facts	r Unit of Messure	Enissen. Farior Unitelifican CH4	Emission Factor N2O	Unit of Messure	Total Quantity Entitled COE	Foral Tornitation Emiliared Emiliared CH4	ral Enit of Measure O	CWP CWP CWP Factor Factor for CO2 for CF4 for NO.O	Unit of G	Total Jumple Total Type Type	Total Total seure Entitled Type	by Measure
to and Business Travel Emissions -	- Passenger Car	Gwoline	820,539.0	The second			820,539.0 Miles	0	SAlke CO2MEN	0,000(03) kg CB4/Mide	0,00003218	E-N2O/felle	298,676.2	25.4	36.3 kg	1 21 310	0036	3073301 kg	30	7.4 MT CO2e
POV Mileage	SUV or Truck	Gasoline	445,385.4				445,3854 Mile	0	S19 kg CO2/Mile	0.000036 kg CH4/Mile	0.0000471	e W20/Mille	231,155.0	16.0	30.91%	1 21 310	C02e	23/28/10/18/	23	S.D MT CO2e
																Sub-Total Rental Direct Fue	Purchase Emis	arioin.	5.6	SO MT CO2e
Wanced Methodology												000000				Contract of the Contract of th			300	30
										1 Square 1 Square 1		Step 2								-

Fundaria Fundaria															- Color									
Example Control Cont	Process Type	Vehick Iype	14	Number of Agency Business Trips	Average Passenger Mile per Trip	Sverage MPC	Unit of Hearuse	oral Mileage by Vehicle Type	United Far	seion Serion Unite	f Mesoure 3	Tactor Units CH4	KMessure Ea	Indication of criter NGO	Unit of Measure	Total Quantity Emitted CO2	Total Quantity Emitted CH4	6	Unit of Per-	AP CWP factor 202 for CHAL	CWP Units	- 25-	Unit of Measure	Total Quantity Emitted by Type
MAPA: Taxat Ral Closing Control Ral CONTROL RAL CONTROL RA		Bus	Diesel	0.0	000			MOD	les	0.107 kg CO	2/Pasenger	0.000001 kg Ch	W.Passenge	10000005 kg 1	W2O/Pas senger M.	J0 00	000	SE 0.0		1 21	310 00%		10 kg CO24	0.0
Op/Engine Red. Date: DI	Ground Business Travel -	Metro / Transit Rail	Electric	00	do			MOO	seg	0.163 kg CO	2Pasemen	0.000004 kg Ch	14/Passerge	0,000,000 kg	N2O/Passerger M	A0.	000	000 kg		1 21	310 CO26		300 % CO3%	0.0 MT CO2e
Date District Control of the control	Mass Iraneit Irie Mileage	Committee Rail	Diesel	00	0.0			14 00	des	0.1720sg CO	2Personger	0.000002 kg Ch	W.Pusange	2000000	N2O/Passenger M	70 P	0.0	0.0 Ja		1 21	310 0026	1	3.00 kg CO2a	0.0
The state of the s		Integrity Rail	Diesel	00	000			M 0.0 M	ब्र	0.185 kg CO	2Pasenger	0.000002 kg Ch	(WPaserge	0.00001 145	N2O/Passerger M.	100	0.0	34 O.O		1 21	310 0026	1 m	10 kg CO2s	A 0.0

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Contact Cont	Processe 7 yps.	Volume Type	Fred Type 1	Community Number of Distance Community Translad Miller Days per (Day) Vene		Tomi Misser L	Unit of Fra	Emission Factor Unit of Measure CCB	Embalon Factor CH4	Unit of Measure	Emission Forme N2D	Unit of Moneure	Total Or Organities Ex- Emisteet CO2	Total To Oceanity Qua Ensited End CH1 N	Total Quantity United Endled Mesoure N2O	GWP GWP Factor Parist for COS for COS	p GWP United or Faren taloc 820 Messure	Total Quantity Emitted by Type	Unit of Total	United County Original Engineer Newson
The control of the	602 Communer Trayel Communer Trayel Personal Owned Veiticles	100	100	26,784,0 26,734,1 2,027,1 3,02,0 720,5		5,659,741.5 [M. 449,741.5 [M. 449,712.4 [M.	-	U.344 lag CC-34Mate U.519 lag CC-24Mate W.747 lag CC-24Mate U.547 lag CC-24Mate H.541 lag CC-24Mate	T. JOSO T. JUNIO T. ANDREA T. ANDREA	I har CHOMise 10 har CHOMise I hy CHOMiste Thy CHOMise Thy CHOMise I hy CHOMise	0.000032 [act of 0.000032] [act of 0.000003] [act of 0.000003] [act of 0.00000] [act of of 0.000000] [act of of 0.000000] [act of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.000000] [act of 0.0000000] [act of 0.0000000] [act of 0.0000000] [act of 0.0000000] [act of 0.00000000] [act of 0.00000000] [act of 0.00000000] [act of 0.00000000] [act of 0.000000000] [act of 0.000000000] [act of 0.0000000000] [act of 0.0000000000] [act of 0.000000000] [act of 0.0000000000] [act of 0.000000000000] [act of 0.0000000000000000000000000000000000		1,875,974,3 1,875,978,4 1,971,107,5 1,941,1,1 1,947,2,0 1,09,415,4		00.00 00		310 310 310 310	(Account to the control of the contr	2000 St. St. St. St. St. St. St. St. St. St.	3,111,4 MM CO3+ 1,23,4 MM CO3+ 15,7 MM CO3+ 15,7 MM CO3+ 115,7 MM CO3+ 110,5 MM CO3+
The control Control	Communer Travel Car/ Vun Pools		Garoline	0.0	2360	U D NA	les les	0.102 hy 00.0Parenger Mile 0.100 kg 0.00/Parenger Mile	Ш	S kg CHAPanezzet Mile 9 kg ChiAPanenget Mile	STREET STREET	NZOPastente Mile NZOPastenge Mile	0.0 0.0	0.0	2000 2000	==		0.0 kg	con-	UDINI COZE
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Control Cont	Communer Trayel Car / Van Podb	C≈ Fool Van Pooli	Garoline Gasoline	8,112,81	\mathbf{H}	1,567,194 NA	Н	0.182 kg CO2P-sepage Mile 0.130 kg CO2P-sepage Mile	0,000015	S rg CH4Fanerger Mile P kg CH3Cantager Mile	0.0	П	284,135.7 425,189 6	Ш	50年		310	- 392,375.0 kg 468,631,3 kg	CO26	2924 MT CO3-
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		(A)			PRO Emission Factor for a WWIP	6.430		PED Emission Entire the a WWIP	Auto		Per capita Stream Lead			Percent			Parents BOD. Parents	3.0
Special of Facility of Facility of Special o		40			Franka Albeard to Facilie	1		fractas Albestel to Facility	op		Name of Paris, And Paris, And Paris,			Nacyala Noon Menda Talk			Parties and a state of the stat	
Wartshyn per Vens		216.86			Westleage per Vear	216.80		Weddings per Yeak	216.000		Wartships per Year	316.40		Wathlays per Year	214.60		Watdays per Year	174
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Process Type	The same of				Praces Type	Contracted Centralised WWTP 1011) Mintle usion / E Desireferation		Photos Lipe	Contracted Complised WWIT's titless Natification Destrictions		Process Lype	Eitheat Die hauge in Rivers and Estudies für WWTP with Nitelfe salan 1 Dentriffe salan		Praces Type	Effluent Discharge to Rivers and Erreaches for WWTP widous Filtrafic added Destriction above		Precess Type	Contracted Wadewater Treatment Legistra

2026	MAJNETCOX
Of this man	a 2 MT Biogram CO2

Step 1	Process Type Data Flowests	Mass of Solid Wage Droposes Off	Mass of Solid Watte Duposed Off.	Degradable organic carbon (DOC)	DOC Appendent Line	Methane Correction Exctor	Methan % of Landfill Gas	Methane Mohenias Weight	
The second second	Turget Subject Quantity		5 KR06	0.203	3005		200	1.83	
	Unit of Magners	1501 Sharton	MT (Megagram)	Megagram C./ Megagram wante	Facents	Factor	Emrent		

	4								The state of the s								
Carbon Apmide	mposition En	Total Quantity Emirrod by Unit of Monaure Unrestrated Lype	Percentage Uncentrolled Release	Landfill Gas Callection System Efficiency	Venting 7 Law Qu	Tend Un Quantity Me	Unit of Barteria Measure Oxidation	ropic rris HHV Unit of Messure tion	Energy Content of Methenr Combusted	Unit of E	Cembustian Emission Datt of Montoure Factor	Combustion Oxidation Fector	ion Quantity in Emitted by Type	Unit of Messure	GWP Unit of by Measure	Lond Quantity Emitted by Type	Unit of Measure
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Median	11	461 MT Megagran)	100%			161 167		W			,		14	41.4 MT CEF4	21 GOSe	870.43	870.4 MT COS
Methotropic Oxidation (brossens)								1621					4	12.7 MT		12.1	MT 350 Intermel
Landfill Gas Collection Law Mediane CH3				5.0		TM 0 th					_	-	a	0.0 MT. TEA	2000 RT	non	BONT COS
Mechanisatis Oxidatian (Serban dono de OSE	-							*60)					а.	110 147		0.0 P	Mr (X) 2 Sugamen
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Landini Cas Piering. Methane CH4 Nitrospecies VIIO				1900		OU MT		438 MMShuMT CH4 438 MMShuMT CH4		0.0 MMSta 0.0 MMSta	GROODS MT CHANDER GROODS MT NECHARBE	Over the control of t	00	O O MET 1720	21 002e 310 002e	0.0 0	0.0 MT CO2e 0.0 MT CO2e
Landfill Gas Flare Venting Methan: CE4	_			-		OBAT	4	1000					O .	0.0 MT CH4	23 0024	0.0 %	0.0 MrT 052e

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8.6 Contr. Waste Disp

FY 2008 Site GHG Estimates

Equatorization (1.5.0 183).

Environmental informational only provider standard FT 2009 0HO emissions. Sites about review estimates and if need the correct baseline data in the appropriate bab. For English emissions standard seasons and stopes is error, send-revised late in the appropriate bab. For English emissions standard seasons and stopes in the appropriate bab. For English emissions standard seasons and stopes are consistent and seasons are co

27	Site	Scope	For Separt Sort	Fuel Group	Enel	Sum Of Crinsumption	Original Dot	MTAuthinC02	MTBiogenic CO2	Total	JOIN Factor
602 DIL-3		Scope 1	Combined Facility Energy Use (from EMS4)	EMS4	LPG-(K Oal)	0.20 kgal		116		1161	6 LPG-(E.Osl)
602 INL-1		Stope	Combined Facility Energy Use (from EMS4)	E3624	Matural Gas-Otory)	24,564 38 thousant cubic Ires	nit cubic feet	1,340.21		1,34021 N	,940.21 Nathral Gas-OACE)
502 DIL-1		Scope 1	Fleet vehicle consumption (from FAST)	FAST	820	50,954.00 gallons		424.73	16301	530.64 B20	320
LINI 209		Soope 1	Fleet with the company than (from FAST)	FAST	G35G 3600	582.00 gallons at 3600 pm	sat 3600 pm	1.04		1.04 C	L04 CNG 3500
502 IMP-7		1984	Fleet rehicle consumption (from EAST)	FAST	TRO	623,095.00 gallons		6,612.05		6,612 06 DEL	281.
602 DAL-2		Spope	Fleet wehicle consumption (from FAST)	FAST	DSLER	5,674 00 gallons				60.21 DELER	DELER
502 DAL-7		Scope 1	Fleet which consumption (from EAST)	FAST	E85	25,826.00 gallons		24.83	13522	160 05 E85	582
602 INL-I		Scope 1	Fleet vehicle consumption (from FAST)	FAST	GAS	415,004.00 gallons	46	3,677.51		3,677.51 GAS	343
502 DEL-7		Scope (Flex vehicle consumption (from FAST)	FAST	CASTE	31,479.00 galleny				727.02 GASTE	JASLE
1-JMI 209		Scope 1	Elear vehicle consungtion (from EAST)	FAST	LNG	45,994.00 gallon	45,994 00 gallons @ 14 7ps; and -234 degrees F	201.38		20138 LNG	DM.
1-THI 209		Scope 1	Fuguive Emissions (from PPTRS)	FUGITIVE	HFC:125	100 38 lbs		127.49		127.49 HFC-125	HFC-123
1-IMI 209		Soope 1	Eugitys Emmons (from PPTRS)	FUGITIVE	HFC134a	253 42 lbs		149.43		149.43 HFC-134	SEC-174
1-THI 209		Scope 1	Fuguive Emissions (from PPTES)	FUGITIVE	HF2143a	0.72 lbs		121		1.24 E	1.24 HFC-143s
502 INL.		3ccpe1	Fugitive Emissions (from FPTRS)	FUGITIVE	HFC152a	24 61 lbs		156		1,56 H	1,36 HFC-152s
502 INL-7		Scope 1	Fuguive Emissions (from PPTRS)	FUGITIVE	HFC-23	0.40 lbs		2.12		2.12 H	212 HFC-23
602 INL-1		Scope 1	Fugility e Emissions (from PPTRS)	FUGITIVE	HFC-32	78.00 lbs		23.00		23:00 HFC-32	IFC-32
502 BIL-I		Soopel	Pugitive Emissions (from PPTRS)	FUGILIVE	HFC365mfe	22.85 lbs		622		8.22	822 HFC-36mfe
602 INL-1			Fugitive Emissions (from PPTRS)	FUGITIVE	HFC-43-10thee	241 07.1		1.00		1.00 E	1.00 HFC-43-10mee
502 INL 1		Soope 1	Fugitive Emissions (from PPTR8):	FUGITIVE	PFC116	20 05 0		2.09		g 60°E	2.09 PFC-116
602 INT. 1		Scope 1	Fugitive Emissions (from FPTRS)	FUGILIVE	SF6	1.50 lbs		9291		16.26 SF6	356
502 IMP-1		100	PPTRS On-Site Landfill	LANDELL	Anthropogenic COZe	5,972.40 mt		3,972.40		5,972.40 A	5,972-40 Anthropogenic Cloze
602 IML		Stope 1	PPTRS On Site Landfill	LAMBYTEL	Brogeruc 2032e	1mt (10.998			966.00	866,00 E	866.00 Blogeno 202e
1-IMI 209		Scope 1	PPTRS On Sile WWIP	WWTP	Anthropogenic 302e	281 fg må		281 10		281 10 /	281.10 Anthropogenic CGZe
602 INL.		Soopez	Combined Facility Energy Use (from EMS4)	EMS4	Electricity MWH	33,660 62 m#h		13,852.16		13,852.16 NWPP	d Way
602 DIL I		Scope 3	From PPTRS	SCOPE 3	Business Air Travel	4,319.00 MTC-024	12#	4,319.00		4,319,00 B	4,319.00 Business Air Trayel
L-INI 208		Scope 3	From PPTRS	SCOPE 3	Burners Ground Trayel	1,408.00 MTCS28	32m	1,408.00		1,408.00 P	1,408.00 Element Ground Travel
602 INL I		Scope 3	From PPTES	SCOPE 1	Employ-Commute	26,525'06 MTCC34	12+	20,525.00		20,525,00 E	20,525,00 Employee Committee
502 INL-3		Scope 3	From PPTRS	SCOPE 3	Off-Sife Landfill	*TOOTM \$5.301	*21		176.33	176.33 C	176.33 Off-Site Landfill (Bio)
602 DAL-3		Soope 3	From PPTRS	SOUPE 3	Off-Site Landfill	557.75 MTCO26	27.0	557.75		55775 0	557.75 Off-Sate Landfill (Antheo)
602 DAL 3		Scope 3	From PPTRS	SCOPE 3	Off-Site WWTP	27.10 MTC02#	12m		27.10	22 10 0	22 10 Off-Site WWTP (Bio)
602 DHL-3		Scope 3	From DPTRS	SCOPE 3	Off-Site WWTP	52.72 MTCO2*	224	32.72		2172	\$171 Off-Sile WWTF (Anthro)
602 FML-1		Scope 3	From PPTRS	T D LOSSE	T D LOGSES Transmission and Distribution Losses	512.46 MITCOZA	124	312 46		91246 T	912.46 Transmission and Distribution Losses
603 Data-S		Scope 1	Combined Facility Energy Use Urom EMS4)	EMS4	Fuel Other Gab	3,220,17 kgal		22,73644		72,736.44 F	22,736.44 Fuel Oil-(COst)
8-TMI 509	Pri:	Soope 1	Combined Facility Energy Use (from EMS4)	EMS4	TNG	371 bbm		30.061		197 06 LNG1	(MG)
603 IML-8		Scope 1	Combined Facility Energy Use (from EMS4)	EM34	LPG-(X-Gal)	287.23 kgal		1,670.85		1,670.85 L	1,670 83 LP3-(K Gal)
603 INL-R		Scope 1	Non-FAST mebility consumption (from EMS4)	EMS4	Auto Cus-(K-Gul)	30.30 Rgal		18.990		26687 A	26687 Auto Gas-IK Gal)
S-TMT 200		Scope 1	Non-FAIT mobility consumption (from EMS4)	EMS4	Diesel-(K-Gal)	232.24 kgal		2,578.32		2,37832 I	2,378 32 Diesel-(K Gal)
603 DALS	-	Zoobe Z	Combined Facility Energy Use (from EMS4)	EMS4	Electricity MWH	196,992.39 mwh		\$1,567.14		81,06714 NWPP	4WPP
602 INL-S		goobe 3	From DFTES	SCOPE 3	Bunness Aur Travel	3,879.76 MTCO2x	oge.	3,879,70		\$,879.70 B	\$,879.70 Business Air Travel
603 INL-8	20	Scope 3	From PFTRS	SCOPE 3	Business Ground Travel	61 00 MITCOLE	124	00 19	100	61.00 B	61.00 Business Ground Travel
SUL INLE	52	Scope 3	From PPTRS	SCOPE 3	Off-Bale WWTF	1.17 MTCD2+	10.6		1117	1.17 C	1.17 Off Base WWTP (Bio)
603 DIL-3		goobe ≥	From PFTRS	SCORE 3	Off-Site WWITE	2.28 MTCD2#	The state of the s	228		2.28 C	2.28 Off-Site WWTF (Anthro)
S-1ML 809	- N	Reope 3	From PPTRS	T D LOSSE	T. D. LOSSES Transmission and Distribution Lesses	£339.97 MITCO24	40	16.885,8		1, 70 QEE, 2	5,339.97 Transmission and Distribution Losses